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A Small Thumbprint: "Albatross Landing"

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A Small Thumbprint:

“Albatross Landing”

by

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A THESIS

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Abstract

My creative thesis is titled “Albatross Landing,” and is the first of three stories in the collection *A Small Thumbprint*. By positing a hypothetical fantasy world containing multiple human subspecies with defamiliarized cultural practices, my project explores the understanding of humans as a biological and theoretical entity, as well as the boundaries between humans, machines, and animals. The group of characters categorized as ‘scholars’ in my project can be considered posthuman.

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Table of Contents

Abstract.....	II
Acknowledgements.....	III
Table of Contents.....	IV
Thesis Critical: Reimagining Scholars as Posthuman Entities in <i>A Small Thumbprint: “Albatross Landing”</i>	1
Work Cited.....	16
Thesis Creative: “Albatross Landing”	19
The Misremembered 1703.....	21
The End of the World.....	26
What She Left Behind.....	43
Monci and Shieras’en.....	55
Tactem and Jackknives.....	64
L. Amona, Upyr.....	76
Albatross Landing.....	93
Coins and Dowsing.....	100
The Nature of Companionship.....	128
Drop.....	144
A Satellite for Scholars.....	152
Beckett’s Box.....	176
Beginnings and Whereabouts.....	208

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Supervisor: Professor Robert Majzels

Master's Thesis: Critical Component

18 April 2013

Reimagining Scholars as Posthuman Entities in *A Small Thumbprint: "Albatross Landing"*

The Thumbprint is a world cupped in a massive meteor crater, where information and stories are protected and censored from public awareness by a scholar's organization called Loa. When the rogue scholar Milam si Sorenti left the organization and published the compendium *The Beginnings and Whereabouts of All Things*, the exposure of sensitive data led to war and genocide, as well as endangered Loa. In the eyes of the scholar's organization, this makes Milam the most heinous of criminals and her apprentice student an accessory to her crime.

Now, a year has passed since the death of Rim Kaya's villainous teacher.

Because the Thumbprint is a world where fish eat lightning from thunderclouds, artisans build puzzle boxes the size of skyscrapers, and where only licensed scholars are allowed to seek and hoard knowledge, Kaya conceals her relationship to Milam si Sorenti and enrolls in Loa's annual license examinations. She is fully aware that scholarship entails changing the basic functionality of her brain and body chemistry to suit the ideals of Loa organization. At the exams, she meets fellow students from eight human subspecies; each of these subspecies relates differently to animals and their own technologies. She befriends a woman who is able to speak a language first developed by trees, and a man whose subspecies forms a hive-mind and collective consciousness.

In my creative manuscript, my protagonist Rim Kaya attempts to become a licensed scholar under an organized education system in a reality separate from ours. This fantasy setting is a

sandbox for the experimentation of human-organic and human-inorganic hybridity, and for the simulation of a posthuman society and identity in the Loai scholars.

Tzvetan Todorov compares the classification of literary genres to the division of biological organisms into families and species (6). Just as bioscientific knowledge is seldom imparted without the clear context of the classification of associated organisms, Todorov is of the opinion that the notion of genre cannot be rejected without rejecting language as a medium for conversation (7). If this is held to be true, then the fantasy setting of my creative manuscript is foundational to the storytelling as well as to the construction of various posthuman ideas in the text.

Fantasy is still a contested genre in academic scholarship. Todorov distinguishes fantasy from allegory or poetry (58), though much of what is currently defined as fantasy is very much influenced by both, as well as by mythologies and folklore. Twenty-first century fantasy derives from a rich history of supernatural works from many cultures around the world: from Homer's *The Odyssey* to the unattributed collection *The Arabian Nights* and Wu Cheng-en's *Journey to the West*. George MacDonald, whose works inspired many canonical fantasy writers, is heavily informed by his Christian background. The contents and medieval social contexts found within many works of twenty-first century popular fantasy suggest a desire to emulate social hierarchies and morals of the past. Whether this is a product of the influence of mythologies, or inspired by the success of stories like Tolkien's *The Lord of the Rings* trilogy, and Lewis' *Narnia* series, the trend is notable. Even urban fantasies such as J. K. Rowling's *Harry Potter* series often draw heavily upon traditional mythological elements. Grittier fantasies such as George R. R. Martin's *Song of Ice and Fire* series may not entirely embody the romance often associated with a medieval time period, but their stories are blatantly set in worlds that resemble the past. While these elements are often found within works of fantasy, they do not define the genre. Fantasy has

been broadly defined as a genre of literature that “does not give priority to realistic representations” (Jackson 8).

In identifying the “principle operative” (3) in fantasy texts, Tzvetan Todorov first described the fantastic as fiction which dwells in the “hesitation” between perception of a seemingly supernatural event and the identification of it as either imaginary or a product of an alternative reality (25). Todorov distinguishes the fantastic from the uncanny, which is ultimately “accounted for by the laws of reason” (46), and the fantastic-marvelous, which “ends with the acceptance of the supernatural” (52). The trope of alternate worlds, with magic and dragons and a medieval civilization, sometimes elves and dwarves, is now an established standard in fantasy literature. Todorov’s first condition for a fantastic text, that readers must “consider the world of the characters as a world of living persons” (33), may be fulfilled simply because readers have been trained to read the fantasy genre. However, because a world consisting of magic and heroics is now an expected standard set by Tolkien’s Middle Earth and the worlds of many subsequent commercially successful works of fantasy literature, simply referencing supernatural events is no longer sufficient to conjure Todorov’s space of hesitation. Therefore, by Todorov’s definition, my project cannot be automatically considered a fantastic story but a marvelous one. The same can be said for many texts considered part of the speculative fiction genre. For example, by Todorov’s definition, many works of science fiction would be considered “instrumental” or “scientific” marvelous (56) and magic realism may be categorized as “exotic” marvelous (55) because of its treatment of fantastical elements.

Many works of speculative fiction struggle to invent unexpectedly supernatural events in order to achieve this sense of the fantastic in their readers. There are three instances of potential hesitation in “Albatross Landing,” each capturing Todorov’s moment of hesitation in a genre now occupying much of a 21st century western readership’s imagination. First is the replacement of

more established traditional fantasy races, creatures, and events with ones inspired by extant biological organisms or folklore of clearly non-western origins. Instead of western dragons, this world boasts glacefish with the appearance of neotenic salamanders and the disposition of extremophiles. Instead of elves, the Thumbprint is inhabited by the long-lived Kiin, who age and wrinkle like trees and still adhere to a strict social hierarchy with an active monarch determined by bloodline to rule them. The comparative defamiliarizing of established fantasy elements may cause a moment of hesitation. The second instance derives from an adherence to western scientific method and rationality, which may condition readers to approach supernatural elements within this text with doubt and incredulity. All events in *A Small Thumbprint* are ultimately consistent with the science of this fantasy world and inconsistent with the laws of our reality. Like many fantasies, “Albatross Landing” draws heavily upon folklore and mythologies, and certain cultures within the project are frozen in feudal monarchies. The image of the sun as a bird wreathed in flame is derived from the Chinese myth of Hou Yi and the ten suns, and the humanoid form of the season winter is reminiscent of Greco-Roman personification of seasons and time. These are, however, juxtaposed against materials and technologies found in the twenty-first century of our world, and an alien insectoid moon. In this realm of high fantasy, the intrusion of automobiles, plastic, videos, and networked information systems is the third instance of potential hesitation.

Fantasy fiction is often characterized by supernatural events and worlds of spectacular dimensions, a trend that Todorov coins as the “hyperbolic marvelous.” Todorov’s notion of genre is compatible with the perception of fantasy literature as fundamentally “‘transcending’ reality, ‘escaping’ the human condition and the construction of superior alternate, ‘secondary’ worlds” (Jackson 1). However, Rosemary Jackson specifies that fantasy does not necessitate the creation of a “non-human world” (5), nor does it transcend our reality. Fantasy estranges and

defamiliarizes, creating what seems, on the surface, a world which is other and different. Jackson believes fantasy is useful precisely because of “this resistance to definition” (1). My work aspires to Jackson’s standards, where genre is not fundamental to the identity of the text, rather the fantastic elements are used as a “literary mode” and a method for challenging predefined boundaries of social conventions (4). More than ever, in the 21st century, science fiction is a vehicle for the subversion of dominant ideology. Fantasy literature can occupy a similar position, as it is also liberated from the constraints of our social and physical reality. It is a space where laws of science, including surface area-to-mass biological sustainability, the plausible dimorphism between sexes and breeds of a single complex species, components of self-identification, and the nature of energy sciences are grossly violated to the point where they are indistinguishable from magic. These freedoms allow fantasy literature to explore the boundaries of humans and societies, and the resistance to realism and definition is, in and of itself, a method of subversion.

Where humanism pulls the disparate social, behavioral, physiological, and psychological aspects of humans into a cohesive and universal entity, I began writing “Albatross Landing” from a desire to transgress. My first violation is the complication of a human-centric narrative through the introduction of multiple subspecies of humans, all with comparable levels of intelligence so none of them can be considered subhuman in the way *Homo erectus* or *Homo neanderthalensis* specimens sometimes are. There is no single human identity in this manuscript. These subspecies of humans embody aspects of Joel Garreau’s description of transhumanism: the “enhancement of human intellectual, physical, and emotional capabilities, the elimination of disease and unnecessary suffering, and the dramatic extension of life span” (Wolfe xiii). The protagonist Kaya’s subspecies, Kiin, lives a lifespan considered supernaturally long by the standards of our world. The subspecies Molas shows remarkable resilience to extreme temperatures. The Sebs

share many attributes with hyperpredators, displaying instinctive territorialism and aggression. These capabilities, combined with various physical and behavioral differences, render the characters of “Albatross Landing” as no longer “unambiguously human” (Wolfe xiii). Though deriving from ideals of rational humanism, transhumanism shares a common belief with posthumanism in the acceptance of an engineered evolution and the “perfectibility” of humans (Wolfe xiii). Transhumanism is a “description of those who are in the process of becoming posthuman” (Wolfe xiii-xiv).

Fantasy works often introduce posthuman or nonhuman societies and peoples through the perspective of identifiably “human” characters. Ursula K. LeGuin, perhaps anticipating reader resistance to her alien planet inhabited by bi-sexed humans in *The Left Hand of Darkness*, introduces her world through the focal character Genly Ai, who is a “normal” human as unfamiliar with and suspicious of Estraven and the other inhabitants of this planet as readers are (17). In Charlotte Perkins Gilman’s *Herland*, an isolated all-women society that reproduces through parthenogenesis is perceived by a group of three male university students from the United States of America. My humans both adhere to and reject the concept of a “perfect” or “normal” human organism and though the protagonist Kaya may regard other subspecies as strange, she is equally alien to readers, coming from a culture with little social mobility which participates in cannibalism. The hybridity of the eight subspecies is not restricted to characteristics they share with other mammalian beasts or quirky social habits. The Hali share societal structures with colonial insects, while the Tomkol share the body density of granite. The Kiin have an ability to create a verisimilitude of life. Among them, there is no one subspecies which is entirely identifiable with the readers. Each one of the subspecies and associated cultures transgresses against values which may be considered commonly accepted in a 21st century

western readership. When Kaya feels kinship to certain subspecies and suspicion of others, readers recognize her judgments as subjective.

Texts of fantasy are often reducible to the upholding of values such as goodness or honor or freedom or innocence against evil. Characters of many high fantasies aspire to a higher moral standard than readers do. While there are notable exceptions, the treatment of antagonistic forces in fantasy is also often associated with moral alignments. While my text also determines antagonists and protagonists based on moral judgments, aspects of their moral foundations are defamiliarized and adapted to each different subspecies. The most predominant value system in the Thumbprint is academic. The revealing of confidential information is considered among the worst offenses. These scholarly moral values are conveyed by more than the reinforcement of education, but by preemptive physical manipulations of the human body, including lobotomy to prevent exposure of information and conditioning of sexual desires towards the seeking of knowledge instead of reproductive purposes. As such, the values of “Albatross Landing” are not the one-sided productions of a static, or even changing, union of mind and body, but a self-perpetuating system which in turn changes both the mind and body that generate it.

The concept of annual scholar examinations are inspired by Chinese Imperial Examinations (Kē Jǔ) introduced in 134 B.C. during the Han Dynasty (Li 12). This system, with roots dating back even further to Yu the Great in 2000 B.C., was originally intended to select government officials from suggested candidates on the premise of both virtue and ability, where the selected candidates are given probationary positions of power for a year (Li 14). As Kē Jǔ developed through the dynasties to include martial examinations for military positions, a sound moral character remained one of its fundamental requirements. By the Ming Dynasty, this exam attempted to weed out cheating through harrowing physical conditions such as exposure or dehydration, to the point where scholars are often forced to drink ink to sate their thirst. In the

year 1463 A.D., a fire killed ninety-odd examinees locked in the exam tent (Li 73). However, as observed from historical records and presented in fictional works such as Wu Jingzi's *Ru Lin Wai Shi*, the exam is not free from political corruption, and participants of the yearly examinations as well as those that pass are varied in their dispositions, motivations, and perspectives. Regardless of their differences, they seek career advancement and renown through a system which prioritizes intellectual accomplishment rather than bloodline. This is a system with the implicit assumption that knowledge of morality and governing principles, and education in these values, create an individual with the qualities of a government minister (Li 75). Scholars in "Albatross Landing" assume a similar responsibility; after passing the predominantly physical annual exam which tests dedication, ability, and attempts to determine moral compatibility, the scholars collectively decide what knowledge is appropriate to acquire, and what knowledge should be kept from non-licensed individuals. In this world, the ramifications of hidden or revealed knowledge are exaggerated. The protagonist Kaya is judged morally problematic based on her upbringing, and given a probationary period. Unlike Kē Jū, however, the Loai association employs far more extreme and physical methods to ensure that certain moral values manifest in their scholars.

Judith Butler posits that materiality and discourse are directly interdependent. She asks in *Bodies that Matter*: "if everything is discourse, what happens to the body" (Butler 4)? Deconstruction of the human body facilitates further deconstruction of identity. In "Albatross Landing," both the material and the discourse of humanity are defamiliarized. "To claim that sex is already gendered, already constructed, is not yet to explain in which way the "materiality" of sex is forcibly produced" (Butler xi). Much of twentieth and twenty-first century studies of gender seek to reconcile our present perception of the female gender against the identity deriving from a singular Platonic representation of the female (Butler 44) and similar portrayals from a "phallogocentric power" (Butler 45). Butler stresses that "sex does not *accrue* social meanings as

additive properties but, rather, is replaced by the social meanings it takes on” (5). Performance and perception of gender in our reality are demonstrated repetitions of norms and iterability (Butler 95). Katherine Hayles’s notion of a “skeuomorph” (17) is applicable to this conversation, where the patriarchal view of female identity, and a humanist view of humans, are vestigial features no longer functional or sufficient in our current social circumstance, yet such interpretations of human and female materiality are “made, through a changed perspective, to become part of the system it generates” (Hayles 8).

Studies in subjectivity, gender, and identity are now posing a reconstituted view of the body as not a fixed, unmoving foundation, but that the body is as dynamic as the subject that occupies it. Mutation and genetic recombination is one means by which change is introduced “into a stable pattern (or code) and into the material world or body” through the generations (Wolfe xvii). In fantasy, materiality is not a “sign of irreducibility” (Butler 4) and the body may be altered far more directly and drastically to explore the consequential changes in its perception, performance, and identity. While “Albatross Landing” uses changes to the human body such as qi and Cae to equalize the roles of male and female, the world also brings into materiality several extreme fantasies about the female body from a patriarchal viewpoint. Females of the Asieli subspecies consume organs of their male counterparts after copulation. In the Seb subspecies, females are as physically powerful as males and have calceous protrusions in their vaginas, capable of causing great harm to the male reproductive organ, and thus the ratio of rape is inversed with females as the aggressors. All of these are treated as norms.

What Butler explores in the context of gender and performance of gender can be applied to the reconstruction of a scholarly identity from the foundations of the material body. While the body offers a predetermined set of probabilities and capacities to perform, or as Aristotle calls it, “potentiality” (Butler 6), ideal characteristics associated with scholarship in “Albatross Landing”

are nurtured in an individual's body through several methods. Preconceived notions of scholarship are enforced through Louis Althusser's ideological and repressive state apparatuses (1489) such as education and law-enforcement. After harrowing Pavlovian conditioning, a phenomenon called scholar's lust manifests as a physiological change in a child's body, determining his or her chemical disposition. Scholar's lust is necessary for the consideration of a scholar's identity in "Albatross Landing." The protagonist's behavior and motivations derive in part from changes in her physiology, and the "reiterative power of discourse" (Butler 2-3) creates her identity, as if from a template. Still, despite understanding the non-natural origins of many scholarly characteristics, it is a common assumption across the Thumbprint that this identity "disavows other identifications" (Butler 2-3). A demonstration of the constructiveness of the scholar as a body and as a social identity reflects similar artificiality in the construction and performance of gender, as well as any other identities that can be assumed, in our reality.

Aspects of scholarship in "Albatross Landing" critically and irreversibly harm the humans who participate in the ideology. Scholar's lust fundamentally changes the sexual drive and survival instincts of scholars, with fatal consequences. The creation of coins is a dangerous process involving lobotomy and permanent disability. These injuries are a result of direct instruction and enforcement from the scholar's organization, and more than that, from the association's assumption that knowledge can only be trusted to people of a certain standard or disposition, even if the identity is artificially created. Many characters choose participation in the scholar identity in spite of bodily injury. Susan Bordo discusses various disorders which are often associated with women, and to which females are more susceptible, in context of the production of identity and subversion of a normative ideal (2367). Bordo especially focuses on anorexia and its relation to an aesthetic of female slenderness prevalent in 21st century western societies. A quote from an anorectic, "You make out of your body your very own kingdom where you are the

tyrant, the absolute dictator,” (Hayles 5) is hauntingly similar to the words used to reterritorialize the female body. Scholars in this manuscript, like women who suffer from eating disorders or hysteria, are victims of a preconceived identity. When the scholars in this novel trivialize or normalize the circumstances of their hyperbolic injuries and a clear causality is drawn between their physical distress and scholarship, readers may experience a potential moment of doubt and hesitation, reminding them of the fantastical nature of the text as well as the existence of similar conditions in our reality.

Science fiction has long explored the relationship between humans and technology. “Our sense of connection to our tools is heightened,” Donna Haraway states in *Simians, Cyborgs, and Women: the Reinvention of Nature* as one consequence of our dependency on machinery and technology (178). The character Boivi-al is a product of a failed fusion of animal tissue grafted to her flesh. While her hybridization gives her certain advantages, the stumps of her wings and the talons of her feet are vestigial and cannot be used, and the process drastically lowered her immunity and general wellbeing. The coin employed by scholars of the Thumbprint, which is created from silver and a portion of the scholar’s frontal lobe equivalent, experiments with an intimate connection between humans and technology. I am not suggesting that these medical chimeras, or the fusion of a human mind with a precious metal necessarily represents aspects of 21st century Western society, but rather I am speculating that these types of hybridity, while carrying their own negative consequences, are a sought-after and crucial aspect of the lives of certain people in this fantasy world.

“Technological determination is only one ideological space opened up by the reconceptions of machine and organism as coded texts through which we engage in the play of writing and reading the world” (Haraway 152). Haraway poses the cyborg as a metaphoric identity to represent both a space “where the boundary between human and animal is transgressed” (152)

and the “disassembled and reassembled, postmodern collective and personal self” that is necessary to deal with emerging social changes (163). To embody this cyborg, hybridity must penetrate beyond the physical form to create a fractured hybrid identity. The construction of individual identity among the scholars is contingent on recognition of their coins as part of their whole, and there is little controversy surrounding the issue of whether or not this is true. Even with the public fully cognizant of the technological origin of the coin, and that a debilitating condition is imposed on a human with the creation of this technology, the scholar’s coins, once quickened, are treated as if they are the original scholar, spoken to and received with respect. They speak with the same speech quirks, knowledge and cognitive patterns. These coins emulate or embody their owners so closely they can “no longer meaningfully be separated from the human subject” (Hayles xii). However, since the coins are difficult to separate from the individuals they are made from, it is not known whether they are capable of thought or independent impetus isolated from their human counterparts. At the same time, scholars are unable to survive or function without the aid of their coins, and are no more capable of independent functioning than are their technology. The reliance of the coin and the scholar on each other invites the question of whether either can be considered wholly human or machine anymore. While the cyborg is originally raised as an alternative example for reinterpretation of the female identity, to “[seize] the tools to mark the world that [marks] them as other” (Haraway 175), such hybridity is applicable to many groups of people (or animals or machines, for that matter) whose status-quo identities requires reconstitution.

“The union of the human with the intelligent machine” is a theme pervasive throughout many works discussing posthumanism, though this union and alteration in embodiment inevitably changes the consciousness and identity of the human (Hayles 1-2). Katherine Hayles suggests four changes in perception as prerequisite for transition from humanist values to a posthuman

view. One, the carbon-based organic substrate is a product of one of many evolutionary paths. Two, the human consciousness is not a crucial anomaly of biological history. Three, the body is compatible with extensions or replacements. Four, that we are capable of integration with intelligent machines (2-3). While in our reality a literal interpretation of the posthuman relationship between humans and machines may be currently scientifically implausible, the recognition that humans are “*essentially* similar to intelligent machines” (Hayles 7) creates in us a “liberal subject” (4) which possesses and is indistinguishable from a body, can influence and be influenced by the body, but is not defined solely by the body. This is not to suggest that the biochemistry of our bodies and the state of our health do not determine our identities, that hormonal imbalances do not create aggression or paranoia, or that stress or a single blood vessel blockage in the human brain cannot erase social etiquette or the ability to follow the moral values of a dominant ideology. Rather the opposite. Posthumanism posits that the human consciousness is a direct result of our biology, but is quantifiable and can be simulated or recreated with a comparably complex system, much like a data file or program might be created from and affected by the performance of a particular machine, but might be transferred and exist in another, or that language might simultaneously exist in “newsprint or electromagnetic waves” (Hayles 25). Hayles cites homeostasis and biological feedback loops as traits shared by both the bodies of organisms and by mechanical entities (8). Within a fantasy context, each of Hayle’s four conditions might be literally fulfilled, and data and human-like thought processes might be emulated in forms other than the human body despite current limitations in real-world technologies and foreseeable obstacles. The scholar’s coin is precisely this intelligent machine made human. Their utility comes from their dissimilarities to their human counterparts and how they are differently embodied. Where a human body is subject to pain, emotional loss, and can therefore be manipulated into revealing information, the coin is not so motivated by self-interest.

While many 21st century western readers may not be as personally and intrinsically tied to their technologies as a scholar to his or her coin, technologies such as pacemakers are perhaps as crucial to their owners' identities as their survival. Even those who can be easily removed from technologies such as automobiles or computers or televisions define their lifestyles by their existence. Without changing the way we construct our identities, we are already cyborgs and technological advancements are already instrumental in changing social hierarchies, the positions of groups of humans and nonhumans in relation to each other.

The scholars of this manuscript are different from us both in materiality, self-imposed and otherwise, and more importantly, in the manner in which they determine their values and motivations; these differences make the scholars posthuman. Posthumanism begins with a “decentering of the human in relation to evolutionary, ecological, [and] technical coordinates” and continues to explore “*how* thinking confronts that thematic” (Wolfe xvi). One such challenge is that the separation of humanity from other organisms is the foundation upon which we justify all manners of discriminations and behaviors. A concept of humans as rational, enlightened, and composed of our economic, technological, medical and philosophical accomplishments, is “an invention of recent date” (Wolfe xv). “Truth” is determined by “scientific discourse and the institutions which produce it” (Foucault 1668), and posthumanism brings into focus that perhaps objectivity and truth cannot be meaningfully distinguished from a form of collective subjectivity, or the subjectivity of a dominant majority. If we cannot rely on the materiality of our bodies, or universally accepted and unalterable “truths,” there is little we can consider certain, and that is another ideological challenge presented by posthumanist thinking. “Albatross Landing” is the first of three stories collected in this manuscript. The subsequent two, “Ren’s Grass” and “Knot” further and perhaps more clearly explore posthuman identities as they relate to gender, the difference between a mind embodied in a different body and the disputed concept of a soul. In

“Ren’s Grass” a man’s mind is absorbed into the body of a plant whose purpose is to distribute fruiting bodies; when encountered out of context and being incapable of speech, the man-in-plant’s performance and behavior causes Kaya to perceive this individual as an attractive, even sensual, woman. In “Knot,” Kaya encounters a vengeful ghost embodied in animal knots braided of human hair, and must reconcile the difference between a preserved aspect of a human and the complexities of the original. “Ren’s Grass” also examines the taboo of cannibalism and how it is directly rooted in humanist thinking. We are “in a realm of dialectical antithesis, which observes that the concept of the human has lost its balance and/or its foundations, and that [we] [respond] either with lament or delight” (Wolfe xviii).

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BOOK 1

Albatross Landing

I remember a boy on the red-tiled roof of the crown pavillion. His hands were warm and coarse and the lines in his palms were dark rivers. His fish-shaped eyes were red from the smoke and his teeth, when he spoke, were white.

“Look down,” he said. His voice watered across my skin. “You deserve to know.”

Excerpted from: *The Beginnings and the Whereabouts of All Things* by Milam si Sorenti

... *Thumbprint*

Thumbprint is the name given to a crater that covers thirty-two-hundredths of our ellipsoid world.

It measures 1,2628 whales at its widest diameter. (fd. 379, Sir Nauf) Sea level averages 120.8

whales below the crater rim. (fd. 392, Kassanda) Due to proximity with the Sunbird, the rim of

the Thumbprint is subject to constant combustion: a phenomenon and geographical area referred

to as the band of fire. The band of fire is estimated to be 300 whales wide and 198 notches in

temperature. (est. 515, Arrund) Three high-altitude locations allow views outside the Thumbprint

past the band of fire: Shattel, Brilinghe-Don, and Weinisi.

The population within the Thumbprint consists of, at the time of publication of this compendium,

around five million species, nine hundred million humans spread across eight subspecies, and

twenty-four deities spread across three continents. (est. 2062, Nurinhal Census)

The Thumbprint was created an estimated eleven hundred million years prior to first recorded

history, and by trapping the continents Hal, Is-Shei, and Winter's Island within it, it is indirectly

responsible for the genesis of life. There is one most supported theory on the formation of the

Thumbprint: an extraterrestrial deity crashed with great force into the world shell. An

exoskeleton, of some two thousand whales in length, suspected to belong to this deity, was found

at the central ocean floor (fd. 812, Vette).

The Misremembered 1703

Year 1703, Kyrum 31

“Mil! Binoculars!”

“Coming!” Milam crashed into the ladder, sending braided rope swinging. She cursed and readjusted the bulky binoculars around her neck. The straps pulled at her skin as she climbed. At the hatch on the ceiling, she pulled on the cold-stiff handle.

With a grunt, Milam pushed open the glass panel and lifted outside. Wind slammed into her from behind. She yelped, hitting her face against the frozen exterior of her house. Her gloves scraped against the ice and glass. Beneath her knees and palms, she could see into her house through the glass roof: the circular room below drenched in furs and pelts, the drains in the walls and latched chests of longcloths. Cold cut past her laced furs and clawed through her hair. She gasped and pressed a hand to her bleeding nose, staining the snow on her glove. Panting mist, she pushed up, warding wind with an elbow, and joined her brother at the roof summit. The boy’s face glowed pink under the frosted furs of his hood. Milam braced her boots against the glass and crouched. “What happened?” Milam asked.

“By mo, Mil,” her brother whispered. “I think Shartown’s completely gone! Shattered! I want binoculars!”

Fog and night interrupted Milam’s vision. She could not see the Sunbird or the cities in the sky, on the other side of the Thumbprint, but she could see their neighboring city in ruins on the ridged horizon. The rock-and-ice summit lit with sporadic fires. Long rows of broken glass domes refracted flame until the roofs resembled an orange sea, tossing light in the dark. A single lighthouse stood in the storm, its glass walls winking firelight. Water rose below the city, laced with foam and copepods. What remained of the cliff-bound city of Shartown was blackened and shuddering with the storm.

Overtop the demolished city, clouds were condensed into an overwhelming humanoid form thousands of miles in length. The storm leaned its face over Shartown. It was so large that its great shoulders crossed the distance between towns and sloped down over Milam's head. Its slender torso lost definition against the horizon. The storm's collar bone was a broad band of light in the night sky. Pale hair fell as mist and rain. The storm's elongated face was a familiar one, especially in the arch of thick lips and the softly tilting shape of its white eyes.

The storm's face was familiar, but its wrinkled nose and screaming mouth were not.

"Mil, why would Winter..." The boy's teeth chattered. He jabbed the binoculars back. "Winter's supposed to be down south at the end of the year! It's not supposed to be here! And it... it spoke soft to me when pa died. We climbed its hair to escape Jes and the bullies and it didn't rain when we rebuilt Perry's house. It wouldn't kill anyone!"

"I don't know," Milam said. She leaned her elbows against her house roof and squinted through her binoculars. Shartown was full of broken glass. She turned the binoculars to the looming storm. In the tresses of cloud and weather, townsfolk flailed: pale contours that stopped moving after colliding with debris. She could imagine the crippled glass and the crawling snow swallowing those who escaped their houses. A small whiff of red diffused into the dark backdrop as someone died, and Milam felt bile barricade her throat. Moisture left trails down her face, which burned in the wind and froze in her nostrils. "I want to, but I don't know. Why Winter is angry, out of season. Maybe we're being punished this year. Maybe we did something wrong."

"It's going to come here next?" her brother asked, hands in Milam's furs. "Should we run?"

"Outrun a deity that size? Not feasible," Milam said. She ignored her brother's frightened whimper. "I'm staying to watch. If I'm going to die, at least I want to know."

Winter rested both gray thumbs upon Shartown, popping houses beneath them, and buried its face in the wreckage. Its chest quivered and its moan was too low for Milam's human ears to hear, but the glass around her sang with the sound and her eyes watered from the pressure. The glass roof beneath Milam's hands cracked. Her brother launched himself into Milam's chest. Milam, wide-eyed and frozen after a long inhalation, watched the storm as its mouth stretched into a great toothless cavern and engulfed the lighthouse. For a moment, the only thing Milam could see in the dark was the deity; Winter's pale skin webbed with white tears. Milam tasted salt on her lips and remembered she was crying. Sea salt, permeated through the coastal cities, crystallized against her skin. Shartown smoked.

Winter dove off the cliff into the ocean, throwing up mountains of white foam. Lightning was a heartbeat in its chest. Winter washed its face in the ocean and its hair pulled out with the current, strands undulating past the shore of Milam's city.

Ground shook as Winter roared again, flinging out its great arms. The continent edge broke and the ocean split. For a moment, Milam couldn't hear anything except the whine of her eardrums, even when she screamed. Her brother clung so tightly to her she could not breathe. A crevice eeled through her streets. The round dome of her house gave out beneath her. Milam tried to grab the glass edges, cut her hand through her glove, and fell back into the house. Milam and her brother landed in the overlapping pelts and glass hailed down. The boy sobbed Milam's name into the furs. Milam held her bleeding hands and arms to her chest.

Her brother shouted to her, but Milam shook off the boy's hands.

On the horizon, the ocean glowed with fire. Milam stumbled out of the house, over the cracks in the ground and stood in the snow. In the house, her brother curled like a pillbug, cradling the awkward angle of his leg. Neighbors screamed in the streets, jostling Milam as they fled. Around her, the rows of domed glass houses splintered into fish teeth. Binoculars to her

eyes, she watched Winter climb out of the ocean, perching, wounded, on the cliff of Shartown. Through the howl of the storm and the fading resonance in her ears, she could make out Winter's voice. She wanted to know.

"I'm sorry." Winter wept thunder. The sky pulsed with its voice. "I'm so sorry. I didn't mean..." Winter peered between fingers the width of cities. "I don't mean to hurt anyone. But... they died. And I couldn't do anything." The same deep cry that Milam couldn't hear dissolved her foothold. She dropped onto her knees and hands, moisture flooding up her leggings. Winter continued, "My lovers died but... See? I have to forget. I get too angry. I must. I'll forget." And Winter expelled a mass of memories and godly essence, aborting a union of divine romance.

On the last day of the year seventeen-o-three, a child fell from Winter into what remained of Shartown. The aborted child of Winter was an adolescent, with hair black as the storm from which it was born and limbs like white lighting. The rag-doll child fell for only a few seconds before landing in ruins and broken glass, but the image was burned into Milam's mind through the binocular lens.

Milam swallowed, binoculars pressing rings around her eyes. The child was the most beautiful being she had ever seen. And she would find out within days that it might also be the most pitiful.

So Winter flew back down the angular geometry of the continents. Above it, where no human could see, the only luminary in the Thumbprint also folded its mantle of light around itself and vanished.

Excerpted from: *The Beginnings and the Whereabouts of All Things* by Milam si Sorenti

... *Cycles*

Date in the Thumbprint is based on the developmental cycles of the moon worm. (vt. -43, Albatross) This system was first proposed by the Albatross prior to recorded history, and later refined as the origin of the moon worms was explored in detail. (fd. 825, Niev) A revised calendar is attached.

Ogum: Here the moon worm is an ovum in a caracin egg shell, which mutates from the dead leuterine chambers of the great exoskeleton at the bottom of the ocean. Fifty-six days in duration.

Neum: Here the moon worm hatches from caracin, crusting on the surface of the great exoskeleton and bedding its ring of teeth into bony substrate. Thirty-nine days in duration.

Raum: Here the moon worm detaches from the exoskeleton and, in a form reminiscent of early esaen-age fish, migrates to the ocean surface. Sixty-seven days in duration.

Elyum: Here the moon worm breaks free of water, takes an elysian current to the mesos and attaches to the shift in air composition between atmospheric layers. It mounts the shed shell of the old worm and weaves itself a new cocoon. Forty-four days in duration.

Kyrum: Here the moon worm clips a caracin mouthpiece to its cocoon and breaks free. Its adult form cannot be sustained by our atmosphere and it falls, heavy and visceral, from the sky. Only the cocoon remains in the mesos. Thirty-one days in duration. (ri. 2063, Yuan)

The End of the World

Year 2052, Kyrum 22

When I was ten years old, my teacher took me to see the end of the world.

We flew north on a gull with lopsided wings, following the abrupt severance on the far horizon where the opposing rim of the Thumbprint fell away into space and sky. Salt and flea eggs frosted the gull's feathers. It was high summer in Moland Kingship, but there, wind still found crevices in my layered blubber jackets and the cold air rattled my ribs with each gull wing beat. I could barely see the steady blinks of the lighthouse past the cracked and salted glass screen. The leather harness strapping me to the bird's back bit into my thighs and I couldn't feel my ears for the cold. My chest, however, was warm from my teacher's story.

"If I have been taught one thing by the year seventeen-o-three, it is that humans must not be helpless against godly power. We must have weapons to fight. This power must be hidden from public knowledge, protected by humans who understand not to use it against each other, not to draw attention, until those crucial moments when humans need to survive their deities."

"And then what?" I asked when she paused. We bookmarked through wind. "The story I mean. What happened after that night?"

"Winter forgot everything," my teacher said, gripping my wrist, "forgot the deaths of its immortal lovers, its rampage, and its offspring. Shartown was rebuilt and renamed Shattel City. They rebuilt the lighthouse. Most, like my brother, never spoke of the year seventeen-o-three again. Now, more than three hundred years later, the few who remember this story are licensed scholars, their pupils, or half a heartbeat from the grave, and so seventeen-o-three came to be known as the misremembered year; the year no one speaks about. I can relay this story now because Winter is on the other side of the Thumbprint and out of earshot. Remember Kaya, this

story must never, never be told under Winter, because if Winter remembers the circumstances of its lovers' deaths, its anguish may destroy the world again."

My teacher was equally bundled in layers of jackets, and her ears were half hidden by the fur around her shoulders. I watched the silver coin strung around her neck. It balanced on the ridge of her collar, winked light at me, and then it said in a metallic version of my teacher's voice, "Winter malingers. It's been three centuries, after all."

"But if we're not supposed to tell anyone, why are you planning to publish the story?" I wondered.

My teacher shrugged and did not answer. "I was very young in seventeen-o-three," she said. "So there're holes in my story."

"There's a big, big hole," I said. "The child's story! Why's the aborted child the most pitiful being?"

My teacher and her coin both laughed. As we descended through the lowest stratum of clouds, she touched a cold hand to my neck and shouted over the wind, "Look down!"

"Tell me the story first." I shuddered away from her hand and her pointed nails.

"Look down first."

I growled but got my first look at the end of the world over the curve of the gull's gray shoulder.

The end of the world: Shattel City. Shattel was the city closest to the northern edge of the Thumbprint. It was the highest place I'd ever visited. Even the ocean was high there, with waves rising close enough to swat us from the sky. The city was submerged in snow and steam, set on a high cliff with a skirt of salt water. Shattel's buildings looked like the snow globes Uncle Nin had given me when I was younger, except with kitchens and bookshelves inside instead of toy towers

and bridges, and the glass kept out the weather instead of in. Beads of landships hummed among the globed buildings, parting scars in the steam.

Shattel City was known for the deep ocean rift at the base of its cliff, carved by Winter more than three hundred years ago, but the chasm wasn't very impressive; I could barely see it beneath the water surface as we flew over.

Instead, I remembered the small lighthouse at the pinnacle of the cliff. It was a construction of plain white granite and stained glass, with a single tower reaching up in prayer. It sang with the voice of a child. At the time, I didn't know how architecture could produce a human voice.

I spent the first day in bed with altitude sickness.

The faucets of Shattel City released steam instead of water, which was frustrating because I couldn't clean myself. I couldn't even warm my feet. The rag hanging under the sink remained stubbornly damp. Our small live-inn room smelled of vomit and herb medicine. My teacher sat at the desk with a lit sun-stone and a mug of steaming seal milk. Her thick gray braid was wrapped once around her neck like a scarf and her left hand was pale around a stub of pencil. The silver coin tickled her knuckles. My teacher always wrote stories before bed.

My teacher was one of the northern people, a Molas and native to the snow, but she didn't look the part. Where Shattel's citizens sported skin as pale as the glass they lived in, skirted with purple-gray spots around their faces and scrawled down their backs and arms, my teacher's arms were kiln-baked and her spots barely visible. She dressed like the Molas, however: simply, but her fur coats and leggings were always clean and neat and her furred boots always laced to the top. Both Milam and the other Molas wore just a hint of oils and I could tell they spoke carefully though I couldn't understand the Molas tongue.

The curved wall of our room was opaque glass, surrounding us like the inside of an overturned bowl. Beneath my sickness, the pelts smelled sweetly of mo, like the hydrangeas my father used to leave too long in the Sun. Long-furred pelts flooded across the narrow mattress. I bound myself in a blanket of orange fur and took one side of the bed but felt too dirty to sleep. Sweat glued my longcloths to my arms and thighs, rubbing uncomfortably when I shifted. I held my eyelids shut and listened as my teacher scratched at paper.

“If there’s no water here, what do the Molas drink?” I asked, tongue scraping against the words. After only two years of speaking Ha, the interkingship tongue still emerged awkwardly. My throat constricted with a new sentence of dry heaves.

My teacher laughed. I heard milk swirl in her mug. The silver coin around her neck laughed with her, their voices nearly identical. I scratched at a fresh scab on my forearm. “Snow is water too, Kaya.”

I rolled my eyes behind my closed lids, and felt dizzy from the action. “Steam is water also, no? But you can’t drink either. You said snow takes too much energy to break down, and dehydrates instead.”

“Sleep,” Milam’s coin commanded.

“Don’t want to,” I said. “You haven’t told me what happened to the falling child.”

The pencil stopped. My teacher paused for so long I thought I’d said something wrong and quailed, throwing my arms up to my face. I opened my eyes and saw the silver coin swinging on the chain around her throat. My teacher threaded her pencil into her long braid and extinguished the sun-stone by running a finger across its sanded surface. Glass walls softened the darkness, glowing with the snow outside. I felt her weight sink into the other side of the bed and flinched. She unsheathed a long white harmonica from a pocket and carefully positioned it on the

bed. An imprint of the dying moon worm at Kyrum cycle was engraved in a corner of the instrument. Milam dropped furs over metal. “Not tonight.”

“I’ll snore,” I threatened, relieved she wasn’t angry. I giggled when Milam glanced at me.

“I’ll tell you tomorrow, when you’re not so ill. There’s something here you need to see first.”

“Promise, then.”

My teacher laughed because she knew about promises, how they shaped a person, how they etched deeper and subtler than the influence of peers or birth or blood or ashes. Of course, that was a Kiin belief, my belief, and she was not a Kiin. “Would that make you feel safe, Kaya?”

I didn’t nod because I hadn’t picked up the habit. Nodding was a tradition of my teacher’s people, not yet mine. Instead, I reached my little finger into the darkness, and breathed out when she hooked her finger with mine: a promise.

Year 2052, Kyrum 22

I never dreamed of my parents. I did, however, used to dream of the boy on the roofs, and of Uncle Nin. “*Kaya, quiet. Quiet.*”

My teacher shook me awake. Furs and the scent of vomit assaulted my face. My shoulders were exposed to cold, pelts flung wide. Groggily, I batted at my teacher’s hands because they pressed into my bruises. “Sleep... teacher...”

“Kaya,” my teacher said. “There are people on the roof.”

Those words brought the barest sliver of tightness to my lungs, and I woke a little. Now that the memory of my uncle’s large hands no longer pressed into my shoulders, I nestled deeper into the furs and groaned. The resignation in my teacher’s voice was gradually becoming familiar, as were the smoke of gunpowder residue and the sensation of being watched. I opened my eyes

wider, straining the skin on my forehead, to stay awake. I could feel the pale fog of my breath against my upper lip.

Releasing a long sigh, I flipped to my back. The snow above the live-inn dome was broken by two shadows hovering near the hatch. The glass panels clanged once, twice, against their frames.

My teacher retrieved the white harmonica from under the furs, lifted the quiet scholar's coin from around her neck and left it on her pillow before she climbed up the rope ladder for the hatch door. Pausing briefly at the glass, she shouldered a pair of jackets and then pushed upwards, climbing out and closing the door with a sharp retort of cold and powdered snow behind her. I was left in the soft, soft dark of the live-inn room. Sleepily, I reached out to my teacher's warm silver coin and pressed it to my cheek. The coin laughed a little at my exhaustion and whispered, "sh... sh..." against my skin. Because between my teacher's studies and publications, that was not the first time we survived assassins, I was more miserable at the interrupted sleep than frightened.

I listened there to the sounds of low bickering outside. Metal unsheathed. A grunt. The three shadows on the roof of the live-inn room, those of two strangers and my teacher, flickered and blurred briefly together. Another grunt, and then two of the shadows vanished. I rubbed dreams from my eyes.

My teacher returned with a bloody malatide blade protruded from one end of her harmonica. She ducked into the live-inn wash for a moment, and wiped at the stained metal with the rag from the pipe under the sink. When she turned to me, the long blade was sheathed into the instrument once again. She placed the harmonica under her pillows carefully, and flopped back on the bed. Her silver coin darted into her hair.

"Again?" I asked my teacher in the dark.

I felt my teacher nod and smile against my hand. I said, “Your assassins’re really annoying. They’re on my list now.” Along with fire, pencils, eggs, extra luggage, homework, and withheld stories.

Milam si Sorenti laughed, rolling onto her side carefully so she could touch my face. “Kaya, do you want to go home?”

“No,” I said.

She pinched my side, hard enough to leave a mark. “I want truth.”

I winced. “Yes then, but home was with mother and father, with all my cousins and servants, friends and an archrival with a voice like water, so it isn’t applicable. Tell me a story, teacher. I can’t sleep so you need to tell me a story. Preferably about Moland. Preferably about the kid who fell from Winter.”

“Heh,” Milam said, “sneaky child. Storytelling is like agriculture. You must sow at a time and place which allows the story to germinate optimally.”

“You promised tomorrow. It’s tomorrow already, I think.” I spoke as reasonably as I could, but I knew my voice annoyed her. My voice annoyed myself. That was the point.

“Tomorrow proper, Kaya. Goodnight.”

“But I can’t sleep now! Adrenaline woke me. A different story then? Teacher, teacher!”

I’d learned early on that Milam slept like a stone, and dropped as quickly as one. Thus, I wasn’t sure how she always woke up when strangers approached when I could never shake her to consciousness. She was already asleep by the time I dropped heavily on the bed and pretended to snore, thickly and insistently, until I, too, slept.

I woke to my teacher's off-tune harmonica keening over Shattel's lighthouse's songs. It was a vaguely unpleasant sound, as the harmonica was an unusual monster forged from the moon, silver, and blood sacrifices: the only one of its kind, meant to emit notes too deep and too high to be heard by the human ear, loud enough to cause snowfalls, and soft enough to charm illness. The malatide dagger inside the harmonica cover sometimes rattled against Milam's breath. Hence, not an instrument for proper music. As a child, I'd not thought very much about its significance beyond how it immediately affected me. When I sat up, the tune abruptly cut.

My altitude-induced headache was a shadow in the back of my mind, kneading my skull. I rolled off the bed and slug-crawled to my teacher's voice, trailing furs around my hips. Without opening my eyes, I lifted myself onto the circular chair and sniffed. Furs puddled below the table. I asked, "Is it tomorrow proper yet? You'll tell me the story now?"

"It's tomorrow proper, or today proper," my teacher laughed. "Guess who sailed up from Bronley."

I untangled my eyelashes and forced my eyes open, finally registering that my teacher stood behind a young man. Sitting at the table, he was as straight and slim as a shard, with neatly steam-pressed furs snaked around his neck. He had the same broad nose and pinched lips as my teacher, and he did not look much younger.

"Rogel!" Headache momentarily forgotten, I flung myself around the table at him, wrapping long arms around his neck, and breathed the sweet scent of mo on his collar. "Did you bring me anything?"

"Ugh!" Rogel grunted against my ear. "Kaya, you get bigger every time I see you. What are you feeding her, aunt Milam?" Technically, Rogel was my teacher's great-great-great-grandnephew, but he never addressed her as such.

“Stories and scholarship. Makes children grow larger. We ordered service.” Milam tapped a finger on the tabletop. A dish of mottled gray flat cakes lay beside her hand, flanked by small cups of syrups and sauces. “Blubber cakes. Local food. If your stomach’s still tender, there’s mashed ice with frost bee honey for flavor.”

I groaned theatrically. The cakes were nutty. Blubber was softer than true meat, softer than even pig’s fat. Because my teacher watched me over the rim of her seal milk, I gagged and swallowed. While my teacher used the steam bath, Rogel pressed a finger to his lips and retrieved a small packet of biscuits from his pocket. Rogel’s wife Laisa and I shared a love for Rogel’s baked goods. With a conspiring grin, I dumped the blubber cakes under the bed and drew the pelts down overtop. I didn’t hate blubber, but I couldn’t eat them with my stomach pressing up into my throat and nausea conducting an orchestra in my gut. I stuck the biscuits into the honey bowl instead.

“How is Milam’s temper lately, Kaya?” Rogel asked with a pinched voice.

“Mm, she’s been happy.”

In daylight, the glass dome above gave a warped view of the sky, half clouded with wet snow. I’d never been anywhere with so much snow. I wanted to dive head-long into a snowdrift to feel its texture and how cold it was. Rogel asked after my health, about any stories Milam currently chased, and of any interesting gossip I’d heard. Since Rogel ran a small live-inn in Bronley city south of Shattel, he told me about a Cici man with a beak grafted against his mouth who could not ask for a room through his lack of a functional tongue.

My teacher returned with the worn rag tangled around her hair, fully dressed. Her silver coin hummed on her chest. “Will you stay with us for the day, Rogel?”

“I’m here to pick up treated furs. I had a tratam infestation this cycle. I’ll leave you birds to your stories.” After saying so, Rogel reached across the table to tap my forehead, stalling my

protests. He unfolded his long body from the chair, picked up the thick rabbit jacket slung over the chair back and swung it sideways across his shoulders. “Remember, Molas don’t say goodbyes, Kaya. The Thumbprint is small. We’ll meet soon.”

I pouted. “I’m a Kiin, not a Molas. And the Thumbprint is not small. It’s deep and endless with more stories than any scholar can know.”

Rogel waved two slender fingers. Still a little put out, I mimicked his gesture. He left as quickly and handsomely as he did everything else in life.

“Next time, I expect gifts for me as well, boy,” Milam said as the hatch above us slid shut. My headache returned. Milam sat in the chair Rogel vacated and leaned back so her chair stood on two legs, and then stretched her long neck in such a way that I knew she was thinking of a story. Her gray braid held a dozen pencils, spiking from the tight coils of hair. “Wash up. Walk with me.”

My lips and fingers were sticky from honey. I sponged my skin with steam, wrapped myself in sweaters and my thickest blubber jacket and followed my teacher up and out of the small dome. My arms buckled slightly as I lifted myself out. A ladder was lowered from the hatch to the ground. I wondered how I’d climbed into the room the previous night, with acid leaking up my throat and muscles too cold and tired to support my weight. Even after a night’s rest, my trembling rattled the ladder and I stumbled past the last two steps to the ground. I noted three timid drops of blood in the snow: the only testament of a fight the night before.

During the day, the Sun drowned out anything which might be visible of the cities upside down over our heads on the far edge of the Thumbprint, and the moonworm was a cicada shell clinging to the ghost of the sky.

Steam poured from pipes in the glass houses around us and flooded the city streets. The white river of lukewarm air, weighed down with moisture, circled around my ankles and flowed

past us down the cliff slope. Molas children passed us, shaking the long furs of their jackets. Their spotted faces grinning, pale eyes iridescent in the Sun light, they splashed each other with steam. When they passed, they shouted to me and beckoned, grinning until their spots must've ached. "No, don't," I said in Ha, hoping they understood. "I don't have time to play, really. I have to go hear a story!"

My teacher consulted her map and led us up and out to the cliff ledge. Her silver coin levitated from her chest, pointing the way. The tiered city sat below us like layers of bubble wrap. The cliff ground was reinforced with metal and fences circled the edge. We were so high up, the air so thin and cold, the wind and waves so loud I couldn't breathe well and my face hurt. Shattel's lighthouse reared above us, singing in time with the beat of the end of the world in a language I didn't recognize.

As I walked by the singing lighthouse, I slid a gloved hand along its outer wall. I couldn't stop smiling. The glass was cold and vibrated a little with each note. I pressed my face into the lighthouse glass and kissed it like I used to kiss my mother. The lighthouse's was a comfortable, familial beauty, so different from the sights my teacher usually chose to show me. For two years, my teacher had taken me from one story to another, taunting me with tantalizing details and half-born explanations, until I wanted to tear out my eyebrows. My teacher said that was good, that all scholars needed to inflict deprivation upon themselves until they were infected with scholar's lust: that mental disorder which drove scholars to great heights and early deaths. It was necessary for any true scholar, she said, and until I experienced my first lust, Milam si Sorenti would not tell me the ending or beginning of any story.

A dozen sets of black binoculars were fixed along the fence, aimed over the cliff at the high ocean and the chasm, like a black knife in the water. Each set of binoculars consisted of two

thick cylinders mounted on a swiveling base, with metal handles arching forward. I closed my mouth and touched my teacher's elbow. "I want to see," I said, gesturing to the binoculars.

My teacher gave me a crystal shard, still warm from her pocket. I skipped to the first binocular set, scraped ice from the slot on the swiveling base, and jammed the shard inside. The binocular set blinked open. I rubbed my gloved hands to warm them a little before holding the binoculars steady, shifting the old mechanism so I could see the rift. Fish gathered beneath the singing lighthouse, schools shifting and tails breaking water, sketching spirals in the dark chasm. I watched a pair of shellfish fence with long tongues on a ledge. "They're actually really good fencers, teacher. Reminds me of the performance swords we saw in Sebya, but different."

I angled the binoculars up, past the water, until the cylinders pointed over the edge of the Thumbprint. "I can see outside," I whispered, "out of the whole world!"

"With the Thumbprint being a crater, we have to be this close to the edge and this high up to see past the rim," my teacher said. "This is one of the three places where that's possible."

The Sunbird orbited the Thumbprint just above the lip of the crater, with its black talons trailing in the ocean outside our world. Where the Sun met the horizon, its talons sent up great waves of flame and foam, which broke against the Thumbprint edge and lingered long after the Sun passed by. When the Sun circled back every morning, bringing the dull throbbing sounds of its wingbeats, the bird deity's tail set that strange ocean on fire anew. Nothing outside the Thumbprint could survive the Sun's proximity.

A paper-thin shadow curved over the horizon outside the band of fire, distorted against the white sky and burning water. It took me a moment to realize I was looking at the edge of a continent. I swallowed. The land outside the Thumbprint looked like an inverted smile, slightly raised on its right side with what could've been mountains. Through the smoke and heat from the

band of fire, its form seemed to pulse in time with the melody of the glass lighthouse's song. I heard my heart.

"Teacher..." For a moment, I didn't know if I spoke aloud. "Teacher! What is that?"

When my teacher didn't answer, I released the binocular set to look at her. She leaned forward against the railing of the cliff. Her eyes pointed at the sky.

"What are you thinking about?" I asked, still wondering of the shadow of land outside the world, but knowing she would not answer when captured by a memory or a story.

"I wonder what it felt," she said.

"What felt?"

My teacher closed her eyes. "The child. The aborted child. Three hundred years ago, in the year seventeen-o-three, a child fell from the sky into the ruins of this city. It was on the cusp of puberty, with hair black as the storm from which it was born and limbs like white lighting. Its rag-doll body fell for just a few seconds before it hit the ground, but the image of that falling child stayed with the few witnesses not afraid to keep watching."

"Yes, yes," I said happily. "What happened afterwards?"

Milam did not look at me. She gripped the metal railing of the cliff edge until her gloves creased into her palms. "Locked in a vault at Loai Central Library, there are shelves of histories recorded in red, most of which only scholars know of. This is one of those stories. I... the morning after the child fell from the sky, all the witnesses drove up to the cliffs, found the child curled under a collapsed wash, and we stoned it so Winter's memory would not be triggered." Milam looked at my eyes and saw that I did not understand the word. She spoke when I opened my mouth, before I could interrupt. "We battered that white body with bricks from the surrounding ruins until the child's face caved inward, its skin a mosaic of bruises, and the ground stained blue with its blood. The child, perhaps already dead, was taken to the base of the old

landmark, strapped to the cracked stones, and built into the new walls, into the walls of the singing lighthouse behind us.”

I pressed a hand to my mouth. The story resurrected movement in my gut. The image of the murdered blue-blooded child sickened me: young limbs and shadows and angles in a ruined city of ice.

“I was there too, Kaya,” my teacher whispered. “I drove up with my neighbors and I threw bricks and I heard its bones break. It was terrified. It could barely see. Its hips were displaced from the fall, but it tried to crawl away. We surrounded it. I remember it screamed static.”

A sea bird shrieked. I ran to my teacher, spraying snow, and took her cold hand. “I’m...”

My teacher hooked her arm around my head and pressed me to her chest. I smelled cheap salt soap and oily blubber on her jacket. She exhaled into my hair. Her silver coin pressed into my cheek. “But you know what is worse... Kaya? It is that most of my people are not allowed to remember that incident and bear responsibility for our atrocity. Most people don’t know how that newborn deity paid for our... pathetic... survival with its immortal life. No, we’re not allowed to know. We should be like children: ignorant, ungrateful, no better than sleeping. Kaya, to not know is the worst fate in this world. It means we cannot defend ourselves or learn from our mistakes and weaknesses. Can’t look back, can’t move forward.”

“No. Teacher, that’s not it.”

“Yes?”

“I need...” I rubbed my eyebrows with one hand, feeling the long, stiff locks of them against my calluses. I pressed my other hand to my abdomen. “I feel sick. I need a wash.”

My teacher cursed and rushed me down the slope. We barreled into a young father’s house and sprinted for the back. I squatted and threw up into the round drain in the ground,

miserable as my stomach turned and belched. Closing my eyes and holding my breath, I heard my teacher begin to apologize for me outside the door. The young father hitched his infant higher on his back, rushed for his glass kitchen and brewed a small pot of water and soft snow net fungi, ladling it into a steaming cup. He handed me the cup through the door.

My teacher played an allay on her harmonica to the young father and his child for his troubles, standing up straighter and breathing easier afterwards. I smoothed the bitterness from my mouth and draped over my teacher's shoulders, locking my arms around her throat, tucking my cold feet into her loose pant pockets and pinching her waist with my knees. Her silver coin swung around her neck to nestle by my head. "Teacher," I murmured into her warm neck as we snuck out of the house. "Molas are good people. And so I'm sure you weren't villains in the story. But I wouldn't have stoned the child."

The silver scholar's coin hissed and slapped my face, breaking open old lines in the corner of my mouth. I jerked back, pressing a hand to the raw skin.

My teacher hitched me up a little and swung her braid around her neck, pencils pointing outward. I ducked back, but not in time. Breath ragged, I touched my fingers to a bloody lip. My teacher said, "You'd choose to save someone on the basis of its age without knowing the whole story. That's unworthy. Why does a child deserve more consideration? A scholar needs to grasp all the facts before speaking."

"I wouldn't have stoned that kid," I repeated, swallowing iron, "even if I knew all the facts. I don't care about age. But see, a kid falling from the sky is a story, and I'd never stone a story."

My teacher laughed, arms tightening around me. "You're right. Sorry. Listen to that. You're right. Yeah, you might make a decent scholar one day. I look forward to seeing it." She

reached over her shoulder for me, hand cool against my cheeks. Together, we descended the cliff back towards our live-inn room.

Pressing my face into the back of my teacher's neck, I thought again about the land shadow. "Teacher, I saw something outside the Thumbprint," I said. "Looked like land. What was it?"

"It's land," my teacher said. "It's the last continent not trapped inside the Thumbprint, so it still moves with lava currents at the world's core. You often see it from Shattel or the Weinisi Islands. We speculate there might be life at its center, safe from the band of fire, but no one knows for sure."

I wanted to know: the earth of a foreign continent between my toes, whether life there would be carbon-based, whether trees might still be green. I gasped fog. In my discomfort, I didn't notice the speeding of my pulse or the shortness of my breath. Unfamiliar heat shifted in my groin, but it was masked in the ache left from bruises and cold and sickness. My eyes watered. I concentrated on breathing and keeping watering eyes open against the cold. I pictured the gently burning band of ocean and the thin silhouette of a moving continent. At the time I did not recognize the sensation; that was the first time I caught scholar's lust.

The coin bounced on my shoulder and touched my cheek with its cold ridge. "Liked it, huh," it said. "We call it the phantom continent."

Excerpted from: *The Beginnings and the Whereabouts of All Things* by Milam si Sorenti

... *Molas*

Molas are an ethnic and subspecies of humans. With an average lifespan of forty-three years, Molas are the shortest lived human subspecies in the Thumbprint. (fd. 229, Gord) It is uncertain whether this shortened lifespan is naturally occurring or whether it is a consequence of the Summer deity abandoning Moland millennia prior to written history. To replace the heat of Summer overhead, Molas use a mineral mined from Summer's moulted carcass, called mo, to combat cold temperatures. (fd. 548, Rila)

Standing at eight hands, Molas is one of the taller subspecies, and tend towards a slim set. They have an unusually low pigment count, resulting in pale skin and pale hair, with concentrated spots forming along their limbs when touched by Sun. They show remarkable tolerance for extreme temperatures, and are the only known organisms other than select micral, fungal and insectal species to withstand the effects of the fire drug mo or a fifteen-notch night. (fd. 932, Milor)

What She Left Behind

Year 2068, Raum 53

The first time I visited Moland as a child, I complained about the placement of doors on roofs instead of walls. My teacher laughed at me and said the sky-facing exits with awnings stretched over were necessary. Despite the tale of the year seventeen-o-three, I did not believe that Winter's gentle, humanitarian persona hid anger and malice. I didn't believe that Winter submerged Moland's cliff-based cities in at least twelve nights of snowstorms and thick hail when it passed overhead, as it lingered on the cusp of recalling heartbreak. It wasn't until my third visit, and my first Moland under Winter, that I realized how high the snow could pile, how deadly cold could be, and how alien the city would become under the cover of shifting white.

Bronley was the city a few dozen whales down the cliff from Shattel. It was in Bronley that my teacher was born and raised. During the summer cycles in Moland, Ogum or Kyrum, my teacher and I climbed onto the taller glass domed houses to sit near the roof hatches so we could see up the cliffs towards Shattel City and the lighthouse singing amidst weather. Bronley wasn't a particularly notable city, with no spectacular architecture or uniquely colored auroras. It consisted of rows of glass domes, two or three glass monuments of grace but no particular repute.

Bronley's people resembled all Molas, possessing the genuine affection of an ethnic which knows its lifespan is short. Food in Bronley, as in all of Moland, relied on a combination of temperatures instead of flavors: the textured heats of whale and seal slices, the chill of fat and the coolness of squid. My teacher preferred them, though I still enjoyed more traditional dining experiences.

I'd always loved Moland. Moland glowed with the auroras falling from above, reflected off snow and the glass houses and the beads of glass landships. Moland was the yellows and reds of the Sun, the violets of the moon worm, Winter's translucency, and the refraction of whatever

colors they debated between them. Occasionally, they caught glimmers from cities on the concaved horizon.

Whenever we visited Bronley, my teacher and I stayed at a small live-inn with a single high loft protruded out of the main dome like a monosaur's horn: Rogel's live-inn. Rogel's distant relation to Milam explained the similarities in their soft-spoken voices, and the identical way they wrinkled, like high-grade paper in a flame. Perhaps because he was kind and generous and a popular translator, or perhaps because he was fluent in both Ha and Molas, and spoke a handful of other common tourist languages, Rogel's small live-inn was consistently full.

Sixteen years after my first scholar's lust, I stood shakily in the main dome of Rogel's live-inn and watched the dim outlines of dry snowdrifts swimming past the glass, past the city, towards the ocean below us. My red motorcycle coughed, handlebar pressed against my back, attempting to light its own ignition to stay warm. Due to a sudden influx of low temperature, Rogel ushered all his guests out of domed rooms and into temporary cots in the reception center with profuse apologies and refunds. There, as the snow descended over the city, we drank warm seal milk and huddled together under thick furs. Unlike the Molas, of course, I did not take mo with the milk, using packets of spice instead. The strangers in the live-inn were a series of friendly gestures and weather-strained smiles which made the river of blue veins glow in their faces. I could only grin and gesture back because even after twenty years with Milam, I still could not speak Molas.

My blood still lukewarm from the seal milk, I clenched my teeth to stop their chatter and leaned in close to the glass walls to peer out at the dark layers of snow. Gray bands in various shades shifted with the roar of the wind outside, as if we were under water. I wondered if that was what it felt to be buried alive in a snowflood, or if the barest insulation of the glass made things very different. Air struck off the inner glass surface, so sharp it cut through the furs wrapped

around my face, cultivating long jagged red welts around my eyes. Smiling hurt a little. Snot cemented my nose shut. My knees were sore from shaking. My noisy teeth turned cold whenever I opened my mouth to breathe. I watched crystalline flowers sprout from where my breath touched the glass.

My teacher would've enjoyed that particular Winter.

The snow abruptly parted and a slender green shape longer than the live-inn dome crashed against the glass from the outside. I, as well as several other live-inn guests, yelped and jumped. A little girl fell backwards out of her cot. The green shape twisted so its dorsal fin brushed against the glass. The creature writhed, pressed against the dome exterior by the force of the snow. Through the gray currents, I caught a hint of thick, clumsy limbs and Sun-red gills before the creature struggled upwards for the snow surface.

Lights, snow, and glacefish emerging from beneath the ice.

I felt my breath quicken. I hadn't seen glacefish since I was twenty-two.

"You're still travelling with that motorcycle? I haven't seen you without it in years."

Behind me, Rogel, now a slim old man with laugh lines around his mouth and very long fingers, threw on a thick firecat pelt, knotting the collar until only the top of his head was visible above the red fur. He then proceeded to wrap his face with rabbit scarves before drawing the lip of a second firecat pelt and goggles up over his head. Then, with nothing of him visible but the shadows and insulated plastic where his eyes should be, he picked up in his triple-gloved fingers a broad glass board embedded with activated earth-stones, shuffled to the middle of the room, and began to ascend the ladder for the roof hatch. There were two layers of frosted glass panels there, sealed with rubber and gel, and the small space between them stuffed with spare blankets. Still, all the guests in the main room huddled against the edge of the dome, as far away from the hatch as possible.

“Rogel, isn’t that my board?” I asked in Ha, patting one end of the long glass board he clutched under his arm. I knew the board was mine because Rogel had marked the front edge with a gold ribbon and we had painted the length with clouds and the Sunbird and moon worm as friends when I was twelve. What I really wanted to ask was whether I may follow.

“It’ll be a bad night, Kaya.” Rogel si Sorenti’s voice seeped from under the bundle of his clothing. He leaned in closer so I could hear his words. “Frostbite, hypothermia, the whole play. I’m boarding to the common house a few streets down for more firecat pelts.”

“I can come with you,” I offered. “There are glacefish outside.”

Rogel was silent for a moment. The thick heat of the firecat pelts was an aura around his shoulders. I heard the smile in his voice when he spoke. “Little si Kaya, it’s currently fourteen notches outside. So unless you’ve been drinking antifreeze or took up mo while I turned my back, you can’t survive that. I’m bloated with mo and I’ll still get frostbite. Besides,” he flicked my forehead and batted my fingers away from my board, “your board has the best weight, and it’s only polite to let an old man use it. What would she say?”

“You’re only seven years and two cycles older,” I protested, but I let my fingers slide off the board. Rogel claimed the board’s great balance and craftsmanship compensated for my utter clumsiness on moving snow, but tell true, I boarded as well as most Molas. Rogel had taught me when I was very young, how to hook my shoes to the base of the board, how to lean my weight while squatting to change directions. He was a young man when I was a child, but because of the discrepancies in our life-spans, Rogel was already an old man as I tiptoed into puberty. It was a strange and heart-breaking experience, watching him race through life so. Sometimes, I hated my longevity, and I was not yet three decades. I wondered how my teacher endured three unnatural centuries.

Three centuries was a long life. I cringed and knew I would have the same, though for my part it would be simply an attribute of my subspecies.

I glanced around at the dome almost completely submerged in snow, lit only by the light from a ring of activated sun-stones near the ceiling, and felt a wave of depression. The only benefit of longevity was the infinite quantity of stories still left to chase in the Thumbprint. Glacefish, for one.

Glacefish weren't true fish but a distant branch of lampreys: eyeless and jawless, only ever emerging on the coldest of Moland's nights after being submerged in the ice underfoot for decades, eating debris and locust corpses trapped there when the ice first formed. To celebrate my fourteenth birthday Milam had forecasted cold nights and brought me to Moland to see them mate.

Rogel sighed and his voice was indulgent. "You'll have to settle for the observatory. It's not the best angle and you can't get closer, but there's good light out."

Two other live-inn guests were already huddled in a corner of the observatory when I climbed in. I mimed an unraveling of furs. The two strangers unwrapped themselves and welcomed me into the huddle. The observatory was lifted out of the main live-inn dome, and under the violet light of the silk-cocoon moon in the sky, I could see the glacefish break the snow surfaces with their serpentine bodies and clap at the moon with their fleshy, vestigial limbs. Near the edge of the cliff, the snow piled high past the fence and abruptly tumbled off, sending up peacock plumes of white.

A great wave of cold cut into both the main room and the observatory as Rogel opened the first hatch, climbed out, and quickly shut it again. The two Molas guests and I cringed into each other and waited for the hot steam of the live-inn to absorb the low notches. I heard a distinctive click as Rogel latched a board cable to the handle of the second hatch door and then

through the glass I could see the old man slowly float down the street, body steaming in the cold, cold night, with his fur-covered shoulders drawn to his ears and the tail of the rope under his arm. The ocean of snow writhed around him, teeming with glacefish fins and their long caudal sails.

A little ways after the first street, a great glacefish tail struck Rogel in the side. I stifled a foggy yelp and covered my face with my gloved hands as he tipped off his board, body sinking into the moving snow. One of the Molas huddled with me gave a shout, darting out of the furs and into the other room.

My chest caved inwards, and I plastered myself against the glass, ignoring the redness cutting up along my palms beneath my gloves. Wasn't my board supposed to prevent falls? "Rogel! Oh spit, Rogel!"

I couldn't take my eyes off Rogel's sinking form. The line connecting him to the live-inn swung precariously towards the cliff. Glacefish passed close enough to touch as he slowly and carefully turned his board straight again and eased his weight back on. Then, as if nothing had happened, he continued his steady progression towards Bronley's common hall. The other Molas raised her voice and stopped the guests from leaving for rescue. Swaying with relief and the lump which rose in my throat, I saw a single glacefish rear its blind head, stretching out its red gills, reveling in a cold which would kill most creatures in the Thumbprint. Perhaps it was an apparition of the light, but the creature was a cooler green when compared to photobook specimens, closer to the color of algae-dyed water in a well-preserved tourist pond.

When Rogel returned nearly a flap later, pulling himself against the snow currents by his rope, his hands and face were severely frost-bitten, necrotizing at the ends. Ice shattered off his body. The other live-inn guests and I rushed to wrap him in furs and give him hot water with three drops of mo.

When he'd recovered enough to speak, he reassured the other guests and distributed a great bundle of twelve old firecat pelts, which immediately filled the room with heat. Some were ragged and burnt in places, and all of them stank of sweat and sickly sweet mo, but the guests whooped and embraced them. When the other guests settled, Rogel took me by the elbow. "I need more mo and I'll heat more milk for you."

"Rogel, don't be delicate. I don't need it."

Rogel peered at my face as he poured hot mo and milk into separate cups. He smiled and pulled me down to his height by my arm. "Kaya's strong, isn't she? Suppose then she doesn't need a shoulder?"

I let myself be tugged downwards, and poked at the live-inn owner with a thumb. "Not your shoulders. They're puny."

"Then indulge an old man. I think I'll need your big strong arms to cry on." The old man who braved fourteen-notch weather and turbulent snow leaned bonelessly on my arm, grinning from between his glass-colored hair. "Help me to the observatory, Kaya. I told Laisa I would spend the night with you because you need a loved one in the aftermath, so at least keep up appearances, alright?"

I half-bore the old man up the ladder to the observatory. We settled near the edge away from the other occupants, where the snow folded up the glass and past our feet. Rogel wrapped the firecat around us, tucking the heated ends under our toes. I reached down to remove my boots and thick socks. Under the firecat, we shed a layer of jackets so we could feel the pelt's heat.

Though the glacefish teemed around us, spraying snow onto the globe exterior so that white crusted against glass, neither of us looked outwards. At first we spoke of domestic matters, of the fluctuations of live-inn guests, the political intrigues required to successfully run such a place, and that Rogel was saving up to graft a third arm to his ribs.

Partway through the conversation, after the other guests drifted into slumber, I reached a hand into my pocket, netting for the familiar white metal within. A soft hum filled the observatory before it was broken by a dull thud on the glass walls. Rogel glanced up and dropped the lip of the firecat pelt.

“Kaya! What do you think you’re doing?”

The glacefish around us were driven to frenzy, wrapped around the small circumference of our observatory globe. Half a dozen jawless suckers were plastered against the glass, the pink interiors of their mouths gleaming milk-white where moonlight touched them. Red gills drummed against the observatory. One clambered over us, thick limbs clumsily batting for friction, leaving snow and moisture. Their eyeless faces registered neither panic nor predatory urges, just a simple reaction.

I breathed out slowly and pulled the white harmonica from my pocket. It was the ivory-white of newly powdered snow, with the dying moon worm engraved into the long head. Around us, the glacefish and even the snow attempted to enter the observatory, blocking out light. Very slowly, the face of Winter far above us turned in our direction.

“Albatross eyes,” Rogel whispered. “Put that away! You’d think Milam’s student would know better than to take the monster out so close to mine, and where the moon can see!”

“Rogel, I... it’s too much for me.” My fingers around the harmonica were white. Around us, the glacefish slapped at the glass, attempting entry. I imagined that I could feel the quiet, angry gaze of Winter’s pale eyes. Light outlined Winter’s temple and the white wisps of hair there, shone through the snow, wrapping tendrils around the observatory, and then lit Rogel’s wrinkled face. “I can’t... look at it without thinking of her. She just died and left me with this without any explanation or preparation. It doesn’t know me and it does this whenever it feels my touch. I don’t know how to keep it safe.”

Rogel almost reached out a hand. The hum and soft violet glow of the harmonica mesmerized me, and Rogel's voice, when he spoke, was tired. "And you imagine it would not be difficult for me if you passed it to me?" He flinched away, pushed his fingers deeper into his pockets and shrugged the firecat back up his shoulders to his cheeks. "Keep it, Kaya. I've enough trouble with my own monster."

"But how can I, when it hates me? And out of everyone in the Thumbprint, I think you're most suitable to keep monsters," I pleaded. "You're the only person I know who would never use it, never draw it, and never even think about it without prompting."

Rogel shook his head. I knew I was right though, because Rogel slid his hand into his jacket and drew loose a metallic white key the same shade as my harmonica, with the same moon emblem in the head. Instantly, the glacefish scattered, darting away into the snow, stirring tiny whirlpools of white against the glass. Snow blew off the observatory roof and settled back into the currents below us. Winter gave a frown of confusion before turning to face the south-and-east again. Rogel's touch on the white-silver instruments eased rather than incited. "I can't, Kaya."

I knew my expression flickered momentarily to despair, frustration, and then I swallowed and stroked it into gentle disappointment with a free hand. Rogel reached and folded the tips of my fingers over harmonica metal. He peered at my cold-blue lips and the involuntary rattling in my jaw, and shuffled the firecat pelt until most of its length was around my shoulders. He asked, "Have you used it?"

"Once." I feigned nonchalance, fingers still sliding over the ridges of the harmonica, but I couldn't meet Rogel's eyes. His gaze felt like Milam's nails against my cheeks, and his concerned attention shamed me. "Once," I repeated, "during her last, I played a canon and I wondered if the harmonica could pull scholar's lust from her mind the same way it could pull

microbial or viral illness from a body. My lips were so dry after and the nurses tried to take the harmonica from me.”

“Didn’t work?” Rogel asked softly, his eyes fogging slightly as they lifted to the mist and snow outside.

“I don’t have tune like my teacher did.” I shrugged. My eyes ached from refracted moonlight and memories, so I dropped my eyelids. Except as soon as I closed my eyes, I could see my teacher’s emaciated face against a terrycloth pillow. “Maybe I was musically inept and I could’ve saved her if I was better. She... I played so badly she didn’t recognize my songs. None of them.” I breathed out shakily.

“Did Milam instruct you to give the harmonica to me, Kaya?” Rogel attempted. He stopped when I gave him a miniature down-curl of my bottom lip. Instead, he leaned forward into his cup of mo. “And did she tell you who carries the last moon?”

“She kept careful accounts of her limited assets, but she left no instruction. I don’t think she meant to die at all. She didn’t leave this to me, and she didn’t specify anyone either. I don’t understand what she was thinking... or whether she missed something...”

Rogel reached to me and ran a thumb across the corners of my mouth. “Don’t look like that, Kaya. Milam... she loved you best of everything in the Thumbprint. Whatever she didn’t do, and whatever she didn’t tell you, I’m sure she meant best for you.” He pulled me down against his shoulder. I resisted at first, when I realized Rogel wore the same scent as my teacher: the clean scent of freshly harvested spice.

“Rogel,” I asked, and I knew it was a stupid question before it left my mind, “do you love Laisa best of everything in the Thumbprint? If she wasn’t around, you’d still have... hundreds, of friends.”

When the old man did not answer, I took a breath. “Because, because I thought about who else I wanted to see afterwards, but the only people I could think of were either you or in Kiin. There isn’t anyone else.”

All the tension had escaped Rogel’s shoulders. He leaned back, drawing the firecat pelt with him, and looked out at the empty sea of snow. “Friends take work, Kaya. You’ve just moved around too much and never had the opportunity.”

“Mm,” I replied, closing my eyes and breathing in.

After a moment, Rogel rubbed my arm and asked, “You’ll be taking the exam next year then?”

“Mm.”

“What about Milam?” Rogel asked.

“What about Milam?” I closed my eyes.

“Ah. Kaya?”

“Mm?”

“The harmonica. It takes a few cycles to adjust to a new owner. Mine did the same, so don’t be worried. Soon, it will no longer react to your touch. And that scholar fellow Milam knew. The one who wrote her letters all the time. He should know what to do with it. If I’m not mistaken, he should have the third moon.”

“His name is Techatumai. But I probably won’t find him unless I’m a licensed scholar.”

And so I spent the fourth night after my teacher’s burial in Rogel’s tiny observatory, huddled with her great-great-great-grandnephew and only occasionally speaking her name out loud. There, we watched the glacefish churn in the snow ocean outside until the beak of the Sunbird broke the skies to the west.

Excerpted from: *The Beginnings and the Whereabouts of All Things* by Milam si Sorenti

...*Winter*

Winter is one of two deities of climate and season. Composed of cold air pressure, moisture, and sediment, it measures anywhere from 1600 whales (est. 187, Burton) to 3223 whales (fd. 1703, Anon.). It orbits around the Thumbprint in counter-clockwise orientation once each year, beginning from Winter Island in the south, in mid-Ogum and returning the following Kyrum. Unlike other celestial deities such as the Sunbird or the moon worm, Winter is proficient in most languages of human speech and responsive to human contact. While generally benevolent, Winter has been known to throw thunderstorms and hail as well as cause drought after witnessing large-scale violence, particularly human violence. Criminal activity and interkingship conflicts decrease by twenty-three-part-hundreds while Winter is overhead (fd. 1691, Senz). Prior to the tragedy of the year seventeen-o-three, Winter was long known to consort with two land-based deities residing in Cae peninsula: the world tree Atirel and the dreamer Lahmu. The deaths of these two deities in Ogum of seventeen-o-three inspired Winter's trauma, if a deity is susceptible to such mortal conditions, and indirectly caused the scouring of the world, in that year all non-scholars must misremember. After seventeen-o-three, Winter brings long periods of fatal cold, between ten and twenty notches, to Moland during each rotation. (fd. 1706, Dilandi) As Winter has forgotten the occurrences of 1703, it is unanimously agreed between Loai scholars and informatics that Winter should be kept ignorant until such a time when the information can be safely revealed. (dc. 1704, Dilandi)

Monci and Shieras'en

Year 2069, Ogum 7

The Ogum Quill, ocean riding so high up its sides I could reach over the railings and taste the salt water, docked at Innisfall for half a flap. There, I watched from my deck-side worktable with a glass of tomato juice as a ship anchored further in the docks was cannibalized for parts.

From Innisfall, our ship picked up a little parchment of a youth with rough fringes and a patched jacket. The youth had an unassuming face and a sheepish, contagious grin that leaked from dried, cracked lips and the neum of a beard. He was a Hali, tall for his subspecies, with a remarkably square jaw. His straw-colored hair reached down his back, growing from his spine like a horse's mane, and his shoulder blades were decorated with dark tattoos telling the story of his life though I did not know how to read the symbols. He was perhaps a head shorter than I, with shoes worn to sandals, toes sticking out the ends, and the shoe edges mended with white bandages.

I was in the secondary stages of research for the examination story.

The youth spotted me as he climbed up the ship. I frowned, puzzled at his interest. Instead of finding his bunk and stowing the tall pack on his back, he swerved around the deck and came to stand by my table. I looked up at his desert-brown hair and face. "Hi," I said with a frown.

He hitched his pack higher on his back and said, "You're a Kiin."

"How astute," I said. "You're sure to board across all the examinations."

The youth sagged to one side under the weight of his pack and offered me a hand. I touched a knuckle to his in greeting. He raised his chin and grinned. "Call me Mon, of Jhermeg. I've never seen Kiin take the scholar's examinations."

I raised an eyebrow and the youth laughed. "Right, that's an outrageous lie and I should be drowned. Lots of Kiin take the exams; they just never seem to pass. I've checked the roster.

Tenma is an absolute lullaby and Lao has taken this exam seventeen times in twenty years.

You're shiny and new. So tell me your name. No wait, wait, don't. I saw your name on the exam roster, but I couldn't quite believe it. So could it be... could it possibly be..."

I reeled under the assault of his conversation. Of the two Kiin he mentioned, I only knew Tenma, who was a sweet man, if a little lazy. I wondered if Tenma had ever caught a wink of scholar's lust. I wrinkled my nose and attempted to follow Mon of Jhermeg's vibrating lips.

"You'd be the one, that is, I'm not sure if it's rude to say, I know your circumstances, but you're Rim Kaya, right?"

Numbly, I nodded.

"Sweet bird drops," Mon breathed in. "Wow! That's a relic name. To think I'd meet a survivor. Unless, it's one of those mistranslations. I've heard Rens and Yims, and even a few Zens, translated as Rim before. Don't know how any of those work phonetically, but you're not a Yim, are you?" He stared at me with the wide eyes of a scholar.

Slightly taken aback by his enthusiasm, I swallowed. "No, I'm who you think I am."

"That's all manner of incredible," Mon said happily. "Your ancestors really invent scissors?"

I'd never heard of such a thing. "I..." I said. "I don't know. Maybe."

"A Rim scholar," Mon grabbed my hand again and pressed it so tightly against his own I felt a little violated. "Fourth family in line for the high chair! May I see your ashprint? You must know members of the ashlines ahead of you? Song House? Ban? Or..." His voice dropped to a conspiring whisper. "Pen Emperor's family? That prodigy general of Lo House?"

I shook my head and touched my elbow where the boy on the rooftop once supported my weight. "Look, I was seven when I left Kiin. I've nothing."

“What’s wrong with your hand?” Mon asked, wrinkling his nose and gesturing to my left hand, laced with calibrated knife scars.

I was saved from answering by the sounds of the ship. With a long moan of horns and engines, the Ogum Quill pushed away from the Innisfall docks and downwards south towards Loai. The hot ocean wind lifted skirts of water, spinning my short hair back from my face. Mon of Jhermeg’s dirty braids, all six of them, bounced around his shoulders and neck. The mane along his spine fluttered. “Well, you have to pass, right.” Mon said after a moment, scratching his head.

“That’s the eventual plan,” I said evenly. “After I work up motivation to finish the story component they want.”

Mon was quiet for one blissful, miraculous moment. And then he asked, “Want to team up for research?”

Dear Albatross. I wouldn’t be able to concentrate with so much background chatter. “Well... I...”

Mon leaned on my table eagerly. “Consider it. Discussion, fishing, the chase, research, even the writing of it. Scholars always work in groups. I see you’ve a fair hand, and you’ve already started working so you must be diligent. I may not look it, but I’m a demon of a researcher. Ask me to find anything, and my mind’ll churn up earth so potent fossils sprout. I’ve compiled whole genealogies and phyls of organisms in a flap. And I’m the best hand at arithmetics since Beonolli.”

“And I suppose you’re immortal as well, on top of being the best story chaser since the Albatross?” I propped my face in a hand, but I was intrigued. I was passably average at research. I did not always have the patience or the wind for it.

“Absolutely. I’m actually a good seventeen centuries old.” Mon stuck out a tongue to indicate humor. He tipped one of my books over his palm and propped it open with two fingers to the page I was studying. “That’s a lot of sedimentary tables. What’s your topic?”

“So you’re a demonic researcher with Beonolli arithmetics and no sense of humility. Is that why you think you’ve the right to milk my subject?” I showed my teeth.

Mon didn’t answer. His expression colored with a little disdain as he checked a page I clipped. “Ah, I read you. Glacefish. You a fan of relics and tragic extinctions, Rim?”

“Is that a problem, Don Jhermeg?” I demanded. “Maybe I can relate. Maybe I find dramatic irony in it. I’m trying to work.”

“S’pose I can forgive your dull interest on account of your family history,” Mon sniffed. He dropped my books back on the desk. “Very well, I’ll lend my demon brain to you this exam period. In return, you’ll give me your story, your family’s story.”

I felt blood rush to my face. I was not sensitive about my family, but I wanted to cut off Mon’s braids and thread them up his nostrils. “How does your story-fishing technique work for you, Beonolli?” I asked. “Let me know if you hook anything.” I folded my notes along old creases and tucked them into the book pile. With as elaborate a bow as I knew, I swept my books under my arms and squirreled, gracefully, past the other youth.

“So I’ll sign up our names, yes? What title? The twilight of glacefish?” he called after me.

I paused at the threshold of the ship’s library just long enough to laugh. “With trite like that, Beonolli, you hardly need me to write your stories, do you?” I dropped down the steep step into the main hull of the ship.

The Ogum Quill was one of one hundred and thirty scholar ships, but the only one specifically made to carry scholar students. Unlike most other ships in the Thumbprint, its sturdy bowels supported thousands of books, lined from wall to wall, with dozens of vid-stone panels

set in solitary booths. It carried the sharp scent of aged vellum and parchment, of tattered vinyl covers closed lovingly over pages many times older. Vinyl absorbed years off the books, encasing the pigment and fiber inside its pliable, resilient covers. Every fifty years or so, the vinyl would be replaced. The thicker and softer vinyl covers usually indicated older books, to be handled with care. Some of the older books were steamed in plastic vapors, which crusts upon the decaying pages to give them shape and added durability. Above the scent of books was the cool aroma of resin from the wood of the shelves.

A small pantry sat forward in the nose of the ship, where scholar students prepared their own meals of thick bread, heavily seasoned butters, hardy pumpkins with thick green stems, and layers of smoked salmon and ewe flanks.

I dropped myself in the nearest vacant seat and flung my books open with the back of my right hand. My notes twirled once on my index finger, sliding frictionless against the polished table, before I stabbed it with the tip of a pencil and scribbled the line ‘Mon of Jhermeg, demon of a researcher, monci ass’ in the margins.

I managed half a flap of work, jotting down the extreme temperatures glacefish emerged and frowning at numbers I disagreed with, before the youth clattered noisily down the stairs into the library, smelling of a mildly chlorinated shower and hair tangled in a knot. The shadow of facial hair had been shaved off.

To my profound relief, Mon of Jhermeg found someone else to harass. He swaggered up to a young woman four tables down and tapped her work. She was skinny as a hound, as brown as the bread from the pantry, and I could clearly see the jackhammer of her shoulder bone in its socket. Her lips were thick and pale and sensual, with a hook upwards at the corners, strangely disproportionate to her skinny face. Her eyes were round and flinty. From the downy fur at the back of her large, bat-like ears, I gathered she was at least partially Cae, but her skin was not as

dark as a Cae's should be, and her hair was the same shade as her skin. Still, she stood out. Pure Cae were extinct centuries past.

Prior to Mon's arrival, the part-Cae worked with an angry intensity which frightened me. A lanternfly slept in the rope of her hair, fluttering bright red wings and emitting a pale, steady light to illuminate her work.

When the young woman ignored him, Mon stole her paper and said loudly, "Saresen? What sort of name is Saresen for a part-Cae?"

Finally, the young woman looked up and grinned. Her voice, when she spoke, was not particularly loud, but I felt my bones resonate. Her voice was gravity. "Where do the rays go?" That was not an expression I'd heard before, but the woman's tone suggested rhetoric. That, and the fact that no one actually knew where sand rays ended up when they migrated. She leaned forward to press her thick lips to the right corner of Mon's mouth. "Hello, Mon."

Standing together, Mon of Jhermeg and Saresen were colored like the dusky golden Sunbird and the dark Elyum moon worm. The two gave each other a lingering embrace, the lanternfly transferred from one head to the other, and I decided I did not understand the nature of friendships. The young woman named Saresen combed her hair back and flicked at the expression of amusement on Mon's face. "Mop that grin off your face, Mon, before you blind someone."

"I've signed us up, as a trio, for an assessment of the glacefish's ephemeral future."

I flinched, several tables away, and groaned.

"Glacefish are pretty, and doomed," Saresen said airily. "Not much to assess. Who's our third?"

"An exiled nobless from one of the most powerful kingships in the Thumbprint," Mon said. "Someone I'd taken personal notice of. Three guesses who from the roster."

Before the exchange could continue, I stood and stomped up to them, jabbing my right hand towards the part-Cae woman. “Rim Kaya,” I said. “Honored, Saresen.”

The young woman did not touch my hand. Instead, she stuffed her fists into her pockets and frowned. “I see, that would explain a great deal. Made a bargain with Mon? Offered the story of the fall of your ashline so he’d help you breeze through the exam? So you’ve heard of his work, that he could make any subject worthy of Loai ink? So you’re planning to che—”

I interrupted her with a laugh and showed my teeth as Seb fighters did. “Not even remotely. Try again.”

Saresen tilted her head. “Then Mon apprehended you and forced your hand. You’re unfamiliar with the rankings among scholar students. You’re discomforted by his proposal.”

I glanced down at my feet. “You’ve no interest in glacefish. I can tell. Would you convince your overeager partner that we should pass our stories separately?”

“Only if you’re adamantly against it, but it’s not such a bad deal for you, is it?” Saresen shrugged. “See, glacefish are not entirely uninteresting as stories go. They feed off, what, layers of dori fleas, water locusts and other crustaceans trapped in the sediments? Their main food sources are extinct, and such a tragic organism has its own unique appeal. But if we’re partnering and we’re taking your subject, what can you offer? If Mon’s one of the better researchers this year, and I’ve some aggressive story chasing techniques, what do you have?”

“I’m... not sure.” Everything would have been much simpler if I was the only person in the Thumbprint.

“Come on, Rim, you’ve collaborated before,” Saresen said. “Everyone forms opinions of their own abilities while collaborating.”

I looked from Saresen to Mon and back again. “The glacefish you see in the photobooks here are either taken with candescent cameras or digitally enhanced,” I said. “In person and in

their natural snows, they have more ghost-blue than parrot green. They're faster too, than the statistics listed here. These books want us to believe that large cool-blood organisms cannot generate enough energy to move faster than sluggish, but glacefish are surprisingly fast. I've seen them swipe at a board and drag a man beneath the snow so quickly and silently his companions are left oblivious. I've touched their stiff gills the morning after a twenty-notch night, and felt it flake away between my fingers as if flooded with liquid nitris."

"You've seen one in life?" Mon said, awed. He batted the lanternfly out of his face. At the same time, Saresen set her book aside and took a single step towards me. Refusing to feel cowed, I stood my ground as the short, slender woman looked up into my nostrils and eyes. She said, "That's impossible. You're not a Molas. You would need to board. You would need to drink mo and survive fifteen notches."

"Absolutely," I squared my shoulders. "I've boarded since I was thirteen. And you're wrong. I'm not sure of the distribution in Tomkol, but occasional glacefish can be seen in specific parts of Moland even at twenty-five to thirty notches. Singular young, usually, without a school and recently hatched from stasis. They're a little smaller and darker, but still, I've touched a living glacefish. If you want this subject, I am the qualitative and the emotive to your numbers and theory. Is that good enough for you?"

Saresen smiled a smile to match mine. "Try to keep up."

And to that cliché, I shrugged and wondered if they could hear the anticipation in my pulse.

Excerpted from: *The Beginnings and the Whereabouts of All Things* by Milam si Sorenti

... *Cae*

Cae was a peninsula, a human culture and subspecies, and a kingship, all in past tense. Prior to the year seventeen-o-three, Cae was a kingship filled with blackwood and primal creatures many magnitudes their normal sizes, inhabited by a long-lived people as equally known for their promiscuity as their ability to speak the language which created the world. Cae Peninsula was guarded by two deities: the world tree Atirel and the deity of dreams Lahmu. (dc. 32, Hbufililzd) After seventeen-o-three, Atirel and Lahmu both perished, and the Cae kingship was shattered. Animal life ceased to exist on the peninsula, and it is only recently that animals began to migrate back into those tropic, fertile landscapes. (fd. 1987, Dolr) Cae culture, however, lingers, particularly in the group of Cae which joined the exodus of the Loai association in o-o-one. While pure Cae no longer exist, their descendents can be found throughout the Thumbprint. (fd. 1756, Hessen)

What most concerns Loa, unfortunately, is not the wellbeing of Cae's people, its natural wealth, or culture, but the preservation of the language Cae learned from their forest, created by the blackwood trees that predominate the peninsula. While the language which created the world has become extinct, the approximate pronunciations and grammatical structures can be hypothesized, and the less than one hundred functional speakers of this language wield the ability to move energies, shift matter, and apply pressures onto all the laws and patterns of the natural order. (fd. 1855, Ysser) Cae, even fragments of it, has been described as the language which cannot be learned, only understood. Loa keeps a strict monopoly on all working knowledge of Cae.

Tactem and Jackknives

Year 2069, Ogum 9

And so the three of us collaborated. We tossed through books and diagrams and photoguides and I focused far better in a group than I did alone. At first, I thought it a simple side-effect of collaboration, but after a few flaps, I noticed that during each lull in reading, or when Mon struck up playful, slightly inappropriate banter for longer than ten blinks, Saresen would prop her small brown face in her hands and say, "Glacfish don't seem to follow Sulli's Principle. They're an estimated twenty-seven generations from inevitable extinction, but we've noticed no changes to physiology or behavior. Do they not sense inevitable demise, as Goregol Sulli predicted all living things would? Or have they changed while we were not looking?" Or, "Professor Armik Hase speculated that aquatic organisms adapted to porous land mediums like sand or snow require less oxy or neoxy to compensate for their substrate. Glacfish is the largest aquatic creature to live on land, in snow, by about two thousand dimensions. They must do more than require less oxy. Perhaps they do not exchange gas at all, and their gills are obsolete." Those ponderous suggestions lit frenzy in my gut, and I found myself immediately reaching for the nearest paragraph. To my discredit, I did not realize this was intentional until the third day.

Mon, for his part, proved that he was indeed a demon of a researcher and if not the best hand at arithmetics since Beonolli, then at least better than either Milam or I ever were. From outdated sediment tables, he recalculated the content of recently exposed ice shelves, the coarse percentage of dori fleas and other base marine creatures caught in frozen waters when the Summer deity first abandoned its post. From three samples of drilled ice, Mon estimated the rate of consumption and its relation to glacfish populations. Within that single afternoon, he gave a time span and fifteen parts of mercy on either side, as the estimated life remaining to the glacfish species.

Theirs was a distinctly numeric and theoretical approach to story chasing, a far cry from the gut and initiative methods my teacher promoted. I didn't appreciate the books as much as taking in a story with my own senses, but even I was forced to admit that their results were impressive.

On the second day, we were interrupted just as the lights in the library dimmed for the noon break, and our work illuminated mostly by Saresen's fat lanternfly. I could see dust around the insect's brightly-lit belly.

One of the scholar administrators looked up from her vid panel, straightened her spectacles beneath her red hair, and beckoned to me. After the momentary confusion wondering who she pointed at, I rose from my seat beside Mon and Saresen and shuffled up to her. My face ached a little. I wasn't used to smiling or talking so much.

"I've run into a slight problem with your admission, Rim Kaya," the administrator, whose nametag read *L. Amona*, said without a smile. Her fingers were calloused and her nails trimmed. She smelled like the papers around us, though the worn leather jacket around her shoulders belied the bookish scent. Her face was concaved. Her skin was too pale and her hair too red to be natural. Her nose looked to have been broken at least once. She looked down the edge of her spectacles at me, despite my height and her seated position. "Would you care to explain why you've no one listed for a supervisor?"

"Yes, of course. I left the name blank because there was no one I could list." I shifted from one foot to the other. "I intended to ask senior scholar Techatumai, but I could not find his whereabouts or contact him, and so didn't have his consent."

"And you've no references."

I lifted my chin and was consciously aware of my two palms resting gently on the curve of the vid panel. Breathing out, I asked, "What is the slight problem, Dan Amona?"

The administrator waved her butterfly-like left hand in my face. “Sounds like a simple enough case. We get a lot like you, fake scholars taking advantage of the long screening process. We’ll need you to step off the Ogum Quill when we dock at Intas Elore. I will put in a word for you for next year’s exam. You’ll need to come back with a supervisor name, and references from two other scholars, following the proper procedures. We can refund up to half of your admission fee. Which bunk are you in?”

I’d sold most of my teacher’s material belongings to fund my admission. I wouldn’t have enough for a second attempt. “I’m not leaving this ship.”

“Determination is a wonderful trait, for a student with a supervisor,” Amona said, voice like spoiled silk on my skin. “Your bunk number, please, Rim Kaya.”

I thought of the harmonica in my pocket, gently pulsating against my thighs. I smiled and leaned over the table so my silver coin slipped out of my tunic, dangling at the administrator’s eye-level. She glanced at me. “You’re being unreasonable, Dan Amona,” I said. I flicked at the coin at my throat. “They wouldn’t give this to a fake scholar, not that anyone would want one. Nobody would go through the trouble of having their brain synchronized with metal, even one as gentle as silver, unless they hope and are qualified to become scholars. I want this very much, Dan Amona. I’ve lived my whole life to pass this exam.”

“If we allowed every exception through, we would have thousands of incompetent licensed scholars roaming the Thumbprint, sprouting our secrets and writing false stories. Now, I’ve found your file and bunk number. You will be removed from our examinations databases before we reach Intas Elore.”

Her delivery was almost malicious, and I responded to the dismissive aggression in her voice. “Dan Amona, I have the original manuscript for *The Beginnings and Whereabouts of All Things*. I happen to know quite a few publishers who would be interested.”

To the gaunt woman's credit, she paused for barely a moment. Amona chewed on the inside of her cheeks; I could see the concave of the action on the left side of her face. "Who did you say sponsored your coin surgery?"

I kept my voice low. "I didn't say, and I didn't put it into my records for obvious reasons. My teacher was Milam si Sorenti."

Comprehension settled over Amona's expression like precipitation, and then twisted like thunder. Her fingers paused on the vid panels, the stone rings looped around her fingers echoed against the quiet of the library. Her voice was a tightly fist-ed whisper. "Albatross gizzard. Are you out of your mind, Rim? Do you care so little for your world that you'd set that text loose again?"

"Don't," I hissed. "The manuscript isn't on this ship. You let your superiors know that if I pass these examinations, I'll be a scholar. We'll be on the same side, and of course I'll turn the manuscript over to you for safekeeping. Otherwise, even if I'm silenced, they'll always wonder if the knowledge is out there somewhere, unprotected, ready to be unleashed at any time."

"My superiors?" Amona curled her hands to fists and gently struck the vid panel. She clicked her stone rings together, summoning a series of documents to her screen. I waited with a smile I did not feel, eyes fixed on her face instead of her panel. Finally, she whistled out a long, shaky sigh and her unnaturally red hair seemed to stand from her scalp. "We'll weigh your intentions."

I kissed my left thumb: a gesture of gratitude. "Charmed, Dan Amona."

Utilizing my break, I visited the pantry and smothered a handful of bread with walnut butter, arranged three slices of water-softened carrots across the top. I chewed, considered the effect on my mental stamina, and poured myself a fresh cup of tomato juice. From a pocket, I tipped a packet of Bloody Rain spice into the glass and swirled until the powder dissolved.

When I returned to the table lit by the lanternfly, Mon flicked the tail of his pen at me without looking up. “What was that about? You’re not in trouble, are you?” Saresen also paused in her writing and glanced at me from the corners of her long eyes.

“Not at all.” I folded a napkin over the table edge and set my cup on it. I watched Mon finish another calculation, callous fingers stroking the pages, as I licked walnut butter from my fingers. After Mon lifted his arms to stretch and Saresen’s eyes lingered too long on the same page, I spoke up. “Shouldn’t we stop for a story?”

When both Saresen and Mon looked confused, I elaborated. “My teacher said all work must be punctuated with unrelated stories, so our minds don’t atrophy.”

“I find other stories distracting, actually,” Saresen said simply. “Mon is the same, though he’ll relish the distraction. I would prefer you don’t.”

“Except,” Mon added, “if the story’s about Kiin ashlines. About, say, Lo House. Yes, about their one surviving heir. Let’s say... talk about Lo A...”

“I know his name,” I interrupted. The thought brought up memories of the last days before I left home. Hands too large for a boy, and a voice too deep. Smoke and red roofs. A careful embrace. My tears on his silk collar. I molded my frown away. “No, you know? I just thought I’d mention it, but it’s not a big deal. Let’s keep researching in the rooms.”

Year 2069, Ogum 12

The Ogum Quill was a medium-sized ship of orange and blue, with more engine than it needed and propellers disproportionately large for its body. Its figurehead, unsurprisingly, was an albatross in mid-flight, mounted as if drawing the ship forwards. Two antlered antennae reached up from its high dormitories and the ship’s slender shape mellowed to a round posterior. My motorcycle, like bulkier luggage belonging to other scholars, was kept in the storage in the

engine room, bound with rope. I made a point to spend at least a flap there each day, so the vehicle would not feel lonely.

Ogum Quill was an advanced ship, but it lacked a thick padding of buoyant rubber. That was why, by either coincidence or because of the white harmonica, the ship's already dim sunstone lights flicked off several days later. Echoes of surprise and dismay spilled over the long wood tables in the dark. I fixed my eyes on the lanternfly resting in Saresen's dark hair, letting my gaze adjust to the dark. Chairs spoke clumsily into the rugs underfoot as scholar students around the library stood, groping for solid surfaces to ground themselves.

"Calm down." Supervisor Amona's voice was exasperated. "Nothing to panic about. We still have power. We must simply reduce output for the next few flaps so we do not attract attention. Our reports picked up a school of jackknives within five whales. Everyone should return to their rooms and wait for further instruction."

"Jackknives?" I whispered. "Real, honest, jackknives?"

"Yeah, why?" Saresen asked. She closed the vinyl covers of an old statistics manual. The young woman stood and smoothed down the creases in her pants. She gestured towards the stairs. "Now that our studies are interrupted."

"They haven't given any emergency instruction," Mon said. "Five whales is generous. Do we even have to leave? If the jackknives're so far away, we'll have power soon."

"Orders," Saresen said, and led the way upwards.

"I've never seen one," I said after a moment, hand on the smooth laminated railing.

"Of course you have!" Mon exclaimed. "Eel-like, fins like wings, white, wicked blue eyes, eats lightning, hunts prey by spitting electricity..."

"I know what they are," I said, annoyed. "I've just never seen one."

“You’re kidding. They’re abundant around Albatross Landing. You had to have seen them during storms when they jump. They glow after directing lightning to their jaws. Well, they’re fast as freaks, but they...”

Saresen interrupted. “On the other hand, have you ever played tactem, Kaya?”

“Once, religiously,” I said, relieved. The thought lodged in my throat and glowed like a lanternfly in my mind. I wasn’t sure if Saresen spoke because she read the discomfort on my face, or if she was simply bored of the conversation. Unlike the other scholar students, I had never been to the first Loai port city Albatross Landing. I’d never been to Loa at all. “If you’ve read about me, wouldn’t you already know that?”

“Not much recorded about you, false or otherwise,” Mon said. “Not much written about ongoing in Kiin without the Emperor’s approval. You were a footnote in that one small-time newspress, I don’t remember the name.”

Saresen led us across the deck and towards the bunks. I tried to peer over the railings to spot the most dangerous fish in the Thumbprint, but could only see the dark blue of the ocean waters, turning translucent where it licked the ship. Neither Saresen nor Mon stopped, and I hurried to catch up to them. We bowed to a few of the staff and let them pass first. The ship’s dormitory was a single corridor with ten doors and a public wash at the far end. Clean metal, tiles, and even the doors, rumbled gently with the movement of the ship. Saresen knocked on her room door before entering: a formality, because there was no one inside.

Unlike the library, each room in the dormitory was small, occupied mostly by a set of bunk beds with a pair of lockable drawers at the end. The bed frame was made from untreated wood, wedged together with bolts of oak. The wood was sanded down until it was as smooth and cool as water, and a rustic red. Layers of antiseptic and anti-allergenic sheets were folded at the

head of the bed, and a straw mat rolled over top. Curtains could be drawn around the bed. Natural light came through a large window on the far wall. I spotted Mon's tall pack on the top bunk.

And there, on Saresen's bottom bunk, we spread a game of tactem over the sheets. Saresen's was a half set carved from dragonfly carapace, with color-changing silk embedded into patterns and faces. A single silver dice rolled across the vellum, shivered a little, and darted to the middle of the vellum map. The map itself was thickly inked at the borders with copper and metallic burnish, with a blank interior for players to fill out war scenarios. A full tactem set could seat twenty players for days at a time, or a single player for a half-flap. A half set could only seat eight. I perched myself on the straw mat and picked up a game piece, which was the width of my little finger and almost weightless. The clear silk tangled around it turned a yellow when I touched it: the distinctive honey yellow of kaya wood. I wondered if either Saresen or Mon could play as well as Father or Uncle Nin or Grandmother Zenbi once could.

Saresen rolled her silver dice, which came to a stop displaying a drop of water. "Cenfalds Straight, eighteen-seventy," the dice announced. The blank map inked itself, the borders becoming lighter as mineral pigment flowed from them, drawing out edges of land and small spirals to mark whirlpools. Cenfalds was not a friendly body of water. I grinned and adjusted my thoughts for naval combat.

My opponents pawed at their own units. Saresen's silk strands turned dark red and Mon's a pale limerick green. We rolled for the numbers and proportions of our forces. Of my force of thirty, I had sixteen patrol boats, two galleons, three shark ships, two mechanical sharks, one real shark, two submarines, three jackknives and a whale. I dismissed the submarines out of hand and then the game began.

Mon drew the curtains wide to let in Sun light, but closed the room door. I wondered at the necessity of privacy before the young man tossed a small blue-and-black cube across the

game to me. “Game’s no fun without stakes,” Mon said. “I’ll wager this Micken parabox I found at a Katajiin fair. Cost me twenty shards and a night in substandard company, but it’s worth at least a hundred.”

“I don’t mind wagering,” I said with a flush, “but only if neither of you mind losing gambits. I haven’t played in two decades, but I was very, very good as a child.”

“Bold words,” Saresen said, dark eyes taking on a vaguely red gleam. Her slim tongue speared out at her thick lips. She sat forward and leaned her face close to mine. “I’ve played every day for the twenty years you’ve rusted. You think a child’s win streak is equivalent to concerted hard work. That’s rather arrogant for a scholar. I’ll bet this tactem set. What’ll you wager? Something precious or you’re a cat.”

My thoughts turned to the harmonica in my pocket, but of course, the harmonica wasn’t mine to risk or even think about. Instead, I lifted my scholar’s coin from beneath my tunic and up around the wisps of my hair. Both Mon’s and Saresen’s eyes widened as I set the coin by the game.

“Are you for real, Rim?” Mon flicked at my immobile coin. “We’re really going to take it. And we don’t want that on our conscience. You take that back. Saresen’s good.” He would have said more, but Saresen reached out a hand of dark fingers and stroked his lips shut. The young woman did not speak, but her eyes were bright as Sun feathers, and just as likely to start a forest fire.

I could only imagine how my grin must’ve looked, at the prospect of playing tactem for the first time in some twenty years. “As the highest bidder, I believe I have the first turn? I’ll query.”

I took a turn to hold the silver dice to my ears as it whispered me the tidal pressures and structures of the shorelines. Perhaps it was because my opponents were scholar students who

knew of historical battles but did not know the details, both Mon and Saresen spent the next three rounds in inquiry, while I spread my forces between Cenfalds' whirlpools. I lost several patrol boats to the rocks and currents testing a defense line. By the time either Mon or Saresen set down their first pieces, I'd already lost a quarter of my units and set another quarter in ambush.

"Oi, Albatross," Mon said, wringing his hands. His expression was one of panic. "You touched, Rim? You keep putting units in whirlpools! Do you *want* your coin taken?"

"And you keep asking questions instead of sending units," I sneered. "Come on, do it again, query."

Saresen sent a unit into the whirlpools I tested and lost it. She frowned.

After their initial delay, I was able to enjoy a decent game. Mon played with the same arithmetic perfection he researched with. He asked more questions than moved pieces, but defensively, he was solid. For her part, Saresen proved to be as good a player as she claimed: attacking with the ferocity and caution of a small predator. She needled and netted, cut and extended.

However, tactem was neither a game won with arithmetics nor even a truly recreational affair, and neither Saresen nor Mon understood war. At least six of the units I sank at the beginning of the game wore live signals, and since my living units were so close to the dead ones, when Saresen rushed, the dice announced her loss several times before she realized she'd attacked sea faults instead of my units. My little submerged patrol boats struck more damage than their living siblings did. Mon did not make such mistakes, but his formation was a typical two-three-two which watched all directions but left little time to regroup for counterattack. He also placed his jackknives in the small spaces enclosed by whirlpools. A hard suicidal strike with my whale panicked his jackknives and left only a mocking clean-up with the sharks. I may have never seen jackknives, but I evidently knew their habits and military applications better than Mon.

The game was finished within the flap. Saresen was vaguely breathless. Mon tossed me his parabox, muttering “I couldn’t solve it anyway” and I rolled away the tactem game.

After a pause, I gave them a sheepish grin. “Mon, you keep referring to me as Rim Kaya, but I don’t think you really understand what that means.” I tapped the base of my throat with the tips of my fingers. “I was *Rim* Kaya. I was the only heir to the main house of the fourth most powerful ashline in Kiin. My grandmother and uncle were both Sky Generals during their time. My elder cousin, branch family, was Grand Tutor to the last Empress. My father’s ashline produced a few brigadiers as well. One of my distance ancestors was once an Emperor. I was bred and groomed for this work, and even among the ranked Houses, I was known for my games.”

Saresen was a still, angry thing, perched on the bed, mind lingering on the game she’d just lost.

Mon cracked a smile and pinched my shoulder. “And I suppose you’re immortal as well, on top of being the best story chaser since the Albatross.”

I puffed up my chest. “Impervious to bullets and metal, thank you very much. And besides,” I held up a wood-colored unit to my face, “Kaya. My father named me after this game.” And all that aside, my family was killed over a handful of stalemated tactem rounds.

Excerpted from: *The Beginnings and the Whereabouts of All Things* by Milam si Sorenti

... *Silver*

Silver is unique among all metals for its resemblance to rishke stones. Like stones, silver can be activated with a significant input of energy. (fd. 1447, Ly) Activated silver bears very little in common with normative or dormant silver, instead emitting and absorbing impulses almost identical to those of the tenbhito cortex of an organism's brain: the area responsible for logick, memory, and higher philosophy. (fd. 1705, Ly) Thus, silver is used in the cores of all contemporary processing centers, usually synchronized with artificially cultivated gray matter first discovered by the medicists of Ciricici. (ct. 1695, Heuma-nou)

Loa association is able to create an alloy of silver, commonly known as neumatic silver, which imitates higher human mental processes. (ct. 1788, Quest) This is used primarily in their processing rings, tactem dice, library research aids, and in the engines of vehicle operating systems. Their most accomplished creation is, of course, the silver scholar's coin, which is created with twelve-part-hundredths of the tenbhito cortex of each associated scholar, and eventually quickens into a fully functional human mind which surpasses the original in ability to store, retrieve, and process information. (ct. 1852, Yue)

Unlicensed artisans across the Thumbprint have attempted to recreate neumatic silver in different forms. The closest, however, is a powered thought-stone created by the Kiin which records and amplifies memory by conversion to qi, far inferior to a scholar's coin. (ct. 2054, Bal)

Silver is naturally occurring, found in trace amounts in all three continents. It can also be artificially created from a transtance of the far more common paladin. (ct. 1498, Anon.)

L. Amona, Upyr

Year 2069, Ogum 13

I shared bunk with a Seb man named Quip. The arrangement was intentional on my part, because a Seb would not react when I faced a corner each evening before sleep and drew my pistol fifty times with each hand. I was not a notable shot, but on several occasions I'd frightened off optimistic assassins with how quickly and easily I drew the weapon. Quip shared a similar ritual, warning me to duck into my bunk as he stretched and performed a routine of knees and elbows. He also squirreled away four separate blades and a grenade in his bed sheets. He was not a particularly impressive-looking Seb. I'd seen some almost as tall as Kiin, wider about the shoulders or with angles cut into their bone structure that I knew were dangerous. Quip kept his hair shorter than I did, almost a fuzz, and his claws sheathed and well-trimmed. Perhaps his most notable feature was the scar drawn down from the left side of his lip, like a trail of blood on his red skin. Looking at him, I could believe that a Seb Blooded would have ambitions of world domination. With so much power, one would inevitably misconceive oneself as invincible.

I'd bought a thought-stone with the first shards I ever earned when I was thirteen. This I kept with my teacher so I could be forewarned of her moods and changes in thought. I placed this same thought-stone under Quip's mattress as a precaution, but Seb thoughts were difficult to decipher through the dulling sensation of stone.

Two nights after Amona called me to her panel, Saresen knocked at my door. Quip surged upright in his bunk above me. Moonlight reflected off his pupils and he gripped his long carving knife in his fist. I laughed at his paranoia, putting away my own pistol. After a moment, he laughed as well.

Mon and Saresen stood outside, barefooted and dressed only in dark longcloths. Saresen cupped her fingers around a small sun-stone and the lanternfly in her hair was dim and quiet. In the dark, the lanternfly brought out a hint of red in her hair.

“It’s really late,” I began, but Mon pressed a finger to his lips.

“Saresen says there’s something you need to do right now, tonight,” he said.

My puzzlement must’ve showed on my face. Through companionship, I’d learned Saresen could sleep anywhere, and slept a regimented seven flaps each night. Mon though, needed a bed, and when he stressed his sleep suffered for it. In return, I revealed that my best sleep took place in the mornings. I didn’t know what they would consider important enough to skip sleep for.

“Lisarel Amona is an insomniac,” Saresen said by way of explanation. She tilted her head and considered. “That or an upyr.”

Warmth crawled up my face, filling my cheeks. At the mention of Amona, I was suddenly very much awake. “Wait, what? I don’t understand. Why do I need to...”

Saresen took us across the dormitory hall, towards the front door where Supervisor Amona’s room was. She knocked smartly on the door and after a moment, Amona slid it open, wearing a dusty, knitted coat over her longcloth and bare chest. She looked as if recently ascended from a bath well. Without her spectacles or her leather jacket and finger’s width of paints, she looked older and oddly plain.

“What, are you students insomniacs too?” she asked. “Or upyrs?” Her expression soured when we giggled.

“Dan Amona, Rim Kaya wants to ask about her application,” Saresen said. Behind her, Mon perched himself by the door, eyes full of sleep as he watched the corridor outside.

I wasn't aware that I wanted to ask anything, but at Saresen's light shove, I stumbled past Amona into the room. The interior exactly resembled our rooms, except in place of a bunk, a narrow bed sat against the far wall. It was clean and empty, with the sheets neatly folded and the straw mat rolled and propped against the wall. Books piled on the desk and letters in a basket by the bed. A small trash bin sat next to the door, beneath the light controls where Mon stood. Two sets of clothes, the plain blouses and pants she always wore, were draped over a chair, coated with her leather jacket.

"Er... yes. I wondered if there were any changes?" I stammered. "I mean, since before."

Amona, wringing her wet hair, did not look at me. "I've directed your supervisory request to Senior Scholar Techatumai," she said. "There's been no definitive response yet, but one will come before this ship reaches Albatross Landing. One way or the other. Was that all you needed?"

"Yes," I said, wishing I hadn't wedged my thought-stone beneath Quip's mattress and I could catch the edge of Amona's intentions.

"No," Saresen said. I looked at her incredulously. "May Kaya keep a copy of the request letter?"

"No," Amona said. The frown on her face set my heart on timpano, though I wasn't sure why, since I'd already blackmailed her and made an unfavorable impression. Amona could not think any worse of me than she already did.

"Why not?" Saresen asked. She drew herself to her full, short stature. "Rightfully, the student is responsible for supervisory requests. As such, she has the right to oversee and dictate the contents of that letter, so why can't she see it?"

"Rim's situation is a little more complicated," Amona said.

"Why?" Saresen pushed. I held my breath and wondered if Amona would reveal my teacher's identity.

“Why don’t you ask her?” Amona said, batting us out of her room. She ran long nails, which were still painted the same unnatural red as her hair, down the door. Impatience flavored her tone. “Those are enough questions. Rim’s application is in appropriate hands. Good night, students.”

The door closed, and metal clicked against metal as the latch pulled into harbor. Saresen uttered a curse I did not understand. Her thin brown face and pronounced features were pulled tightly into anger. I shuffled in my own longcloths, scratching at my short, sticky hair. “Why did I just pester Dan Amona in the middle of the night?” I asked, bewildered.

“Lisarel Amona lets down her hair at night. It’s the easiest time to read her motives and expressions. I heard this from others who’ve taken the exam before. And now we know. She didn’t send the request,” Saresen said.

“We don’t know that,” Mon said peacefully.

“But I know!” Saresen snarled, but there was little heat in her voice. “Either she didn’t send a request, or she’s hiding something, and the request wasn’t proper. Either way, Kaya, you’ll have to send your own letter.”

“If I knew contact information, I wouldn’t be in this mess,” I muttered.

Mon flicked his fingers through his hair. “I wasn’t aware you had such high connections.” From behind his ear, he produced a small folded envelope. The yellow paper was slightly crinkled, but the cut across the top was neat and straight. A used envelope, damp across the bottom with a faint scent of spice from the interior: addressed from S.q. Techatumai, to T.O. L. Amona. The address indicated the old scholar was in Sebya. I stared at the envelope handed to me, aware that my fingers shook.

“Well,” Mon said. “Either Amona keeps regular contact with Techatumai, or Saresen’s wrong and she did send the request and receive a reply.”

“You just nicked this,” I accused.

“I did, right out of her trash,” he grinned, dragging out the word ‘did’ in a taunting manner. “But you. Who in the Thumbprint are you, that you want flaming Techatumai as your supervisor? Techatumai! Man’s only among the ten highest ranked scholar these last few decades. Come on, you can tell me your secret.”

“I... erm...”

“Think of it as payment,” Mon winked.

“Mon,” Saresen said sharply. “She doesn’t have to tell us anything. Besides, this theft isn’t, strictly speaking, allowed. You can’t ask for a reward for criminal activity. Not and still have my respect anyway. All scholars have a few things they don’t want others to know as well, so understand.”

Mon stuck his tongue out at Saresen, but dropped the subject.

I wanted, quite badly, to know what Mon wanted hidden, but with my own circumstances controversial at best, I held my tongue. Across the hall, I held their hands a moment longer than strictly necessary for wishing a safe night. “I don’t understand why you do any of this,” I said. “We’re collaborating, so of course you want me to last long enough to finish with you, but this is unwarranted.”

“Mine was an apology,” Saresen said stiffly. To my shock, she gathered her long hair over one shoulder and gave me a low bow with her knees and back straight. Her hands were wooden by her side. “For the way I spoke to you when we first met, before I knew your qualities. My disdain was unfounded and cruel. So, I’m sorry.” To her embarrassment, my only reaction was to fling my arms around her shoulders to hide the trembles in them.

Milam si Sorenti was a teacher of very few compliments. I was unused to the warm weight of praise on my chest.

“Well besides,” Mon said, “orphans should stick together. Orphans without teachers, that is.”

Instinctively, I wanted to correct that I did, in fact, follow a teacher. I glanced between them. “Both of you?”

“Mon exaggerates,” Saresen said dryly. “I followed a teacher. What Mon means is that your family circumstances are perhaps reminiscent of ours. Someone we love is also tortured and...”

“Shut up, Saresen,” Mon hissed. He turned to me. I took a step back from him, shocked at the unexpected venom staining his upper lip. The temper was abrupt and overwhelming. For a man who regularly laughed off insults and implications of stupidity and insanity, I’d not expected he could be angered by anything. “Mind your own business.”

“Grow up!” Saresen growled. “You started on the subject, you hypocrite. And you know we both hate Heintols.”

“Oh,” I said faintly. Diala Heintol was the woman who first hypothesized displacement of matter. “Because spilled water is so very loathsome.” Saresen smiled tightly at me and we bid a second volley of goodnights before retiring. I rubbed at my left hand. Despite Mon’s abrupt outburst, the firmness of their good wishes and the way we muttered about our administrator in the hall gave a vague sensation of conspiracy, of a bond which went beyond collaboration and the simple congeniality among students. I felt they would side with me.

Quip woke again when I entered the room. He peered over the rim of the bunk at me, eyes glowing from the residual light of the moon and the waves outside. “You’re shining,” he said.

“I think I’ve made friends,” I replied happily.

“That’s dangerous,” Quip said, giving me a long, speculative look before rolling back under the covers.

“Oh, don’t. You Sebs believe in friendship as deeply as any of us.”

“True, but irrelevant.” Quip slept as quickly and easily as my teacher once did and I could tell he faded as we spoke.

I, on the other hand, held myself as still and quiet as I could in my lower bunk, watching the moonworm outside highlight the window sill and tracing the soft edges of the yellow envelope with my fingertips. Of all of Milam si Sorenti’s acquaintances, the old scholar who twice collaborated with her was the only one to keep in contact. I’d liked reading the letters Techatumai sent my teacher over the years, with his risqué jibes and light-hearted commentaries: as clever as my teacher but less severe. After my teacher realized she could not dissuade me from sneaking out of bed while she slept, she caved and allowed me to read her correspondences. The last letter we received from Techatumai, while my teacher writhed on her hospital cot, was primarily addressed to me, though the letter did not specifically say so. And even in that letter, even when he knew the things my teacher had done, Techatumai was full of affection.

Year 2069, Ogum 12

Letters were delivered at precisely the third flap of each day, immediately after most scholar students stumbled sleepily into the pantry to mix themselves thick caffeinated congee and tea with spice packets. After the stimulants seeped into their blood, the students fought over the first pan of duck-stuffed buns and fish rolls from the kitchens. I skipped breakfast that day and instead waited for the ribbon birds on the broad deck of the Ogum Quill. In the early morning, the Sun turned its face to us from the south, filling the aura of yellow on the horizon with fire and its black, feathered form. The scent of the ocean is lighter in the mornings, and the ship bounced on slow-motioned waves.

The ribbon birds came with punctuality and the wind: a flock of around thirty animals. They were small, beady-eyed, and partially mechanical, with adjustable magnets bedded into their beaks and an alloy of gridols enforcing the bones of their wings. The birds themselves were an off-shade of white and blue, built to be streamlined, with most of their weight in their chests, where their wing muscles were. They darted over the ship railing and into a glass box of heated sand, burying themselves into the substrate to warm their cold limbs. It was several moments before any of the birds hopped to the water and seed dishes. The aluminum tubes bound around their legs gleamed in the glare of the Sun off the ocean.

I stood from my seat along the ship railings with my letter to Techatumai rolled into a small aluminum tube. It was then I saw Amona step out onto deck, leather jacket and red hair in place. She carried the letter bucket in one hand and a grated pork sandwich in the other. She noticed me and paused. Her expression turned ugly. “You have a letter, Rim?”

“Yes. An urgent one,” I whispered.

“In with the others, then,” Amona said briskly. Her hair was brilliant in the early morning, and the paints on her face made her appear paler and younger, though they did not offset the awkward angular structure of her face. I could tell by her dark eyes that she knew where my letter was bound. In her left hand the letter bucket clattered with aluminum as she walked. It was the same bucket seated by her stone panel in the ship library, and students occasionally wandered up to drop their letters within.

I handed her my aluminum tube, turning it slightly so the oils of my hands formed a distinctive fingerprint on the surface. I watched Amona stride towards the glass box, lift the lid, and birds dust themselves before cresting the slope of her forearm. I could not see where she put my tube, and I leaned heavily against the side of the tables. I’d thought to bypass her in the early mornings.

Amona changed the birds' letters and waved them off before descending indoors again. A while after Amona left the birds to fly north towards their next ribbon house, I sat at the desk with my head dropped over the back of the seat. I chanted the last words of Techatumai's letters to myself. "With affection," I whispered. The senior scholar would agree to supervise me. He would have to or be a liar.

"You don't trust Dan Amona, princess?" a voice asked dryly. I turned. I hadn't noticed the other occupant of the deck, seated two desks over and surrounded by the wind shield. I was far too focused on the inbound birds and Amona's figure outlined by the looming Sunbird.

The other was a skinny, older student, with a look of illness about her face. Her robe was covered with dust and wrinkles. A pair of strange protrusion rose from her back. Feathers were braided in her dark hair, complementing the premature grays by her temples. "You should," she said, "Amona being in charge, after all. People generally respond to distrust with disfavor."

"A little late for that," I said. "You're... Boivi-al?"

The older student grinned. "Guessed in one. Not going for breakfast?"

"Not hungry." Not with the sensation like altitude sickness in my gut. "You?"

"Fresh sea air is more beneficial to health. I can live without fresh bread," Boivi-al said. The cigarette stub between her fingers smoked. She blew air upwards and I caught a whiff of what smelled like disinfectant. "Your situation looks a little complicated."

I shook my head and sat in the wind and the gentle slosh of the ocean against the ship.

"You play, princess?" Boivi-al asked. She clarified "harmonica" when I looked puzzled.

"No," I said. "I can't hold a tune, even if I could douse a house fire with it." I remembered singing well as a child, but some time during the long years with Milam si Sorenti, I'd lost my voice. My teacher always laughed off my depression pointing out that I wasn't meant to sing professionally, and so the loss was minimal and worth the exchange for scholarship.

“Must’ve been hard,” Boivi-al said. “I’m sorry for your loss.”

Startled, I looked closely at her expression. Her smile was tired and her eyes were closed above her hooked nose. “What?” I asked.

“You carry it in your pockets absolutely everywhere. It must’ve belonged to someone important, so I’m sorry,” Boivi-al said easily.

“It belonged to my mother,” I said with acid.

“Oh princess,” Boivi-al laughed, which I saw instead of heard from the gentle vibration of her half-formed wings against the chair. “Half the students on this ship know about your mother, and the other half can look it up. You wouldn’t have been able to inherit anything from your mother, not after a trim.”

“And people don’t dog subjects like that if they’re genuinely sorry,” I said.

Boivi-al dropped a hand over her mouth to curtain over her mirth and said, “Sorry.”

I glared at her a few more moments before sighing. “What are Heintols?” I wondered aloud. “Besides the name of the woman who theorized displacement of mass?”

“Oh,” Boivi-al said, her eyes scanning my face. “They’re leaks. They’re masses who displace outwards. They’re what we call scholars who deliberately leaked protected information to the public. So basically the only scholars who ever become famous, or infamous. People like Vecezul, or Jenika of Gau, or...” Her voice trailed off meaningfully.

Or the most famous “Heintol” in the past few decades: Milam si Sorenti and *The Beginnings and Whereabouts of All Things*. Whatever remained of my good humor vanished as I thought of Mon’s anger and Saresen’s careful neutrality. “I think...” I said shakily. “I think I need breakfast now.”

“Good luck against the ravenous crowd downstairs,” Boivi-al said, reaching over her shoulder with a hand to stroke at the mutated feathers there. She still chuckled as I descended the stairs and out of the ocean air.

Year 2069, Ogum 23

Moments before docking at Intas Elore, the administrator Amona called me up to her panel again. At the worried glances of my companions, I waved with two fingers, like Rogel always did, and swaggered with my hands shoved in my pockets. I clicked my fingernails up along the ridges inside my harmonica mouth. Once I reached Amona, I leaned my weight onto the table and breathed out shakily. “What was their verdict?”

“I have contacted senior scholar Techatumai, asking if he was willing to supervise your exam. Unfortunately, he will not.”

“What?”

“He refused,” Amona repeated. “He does not have leisure to supervise on such short notice. He apologizes for his schedule. So what you must do now is...”

“Wait, may I see his return letter then?” I asked.

Amona’s response was a neatly parceled “no.”

Liar.

“I beg pardon?” Amona asked.

“I need to see the letter,” I said, leaning across the table. “Don’t I have a right?”

Amona said icily, “You will drop this subject before I take offense at your baseless implications, at your unsubstantiated slurs on my professional integrity.”

“Well I meant offense,” I fisted my right hand, relaxed it, and then did the same to my left. “I think it’s discrimination and fraud. And if you’re doing this to me, it tells me you’re not

worried about the manuscript. *The Beginnings and Whereabouts of All Things* killed a lot of people when it reached public domain, even if your association managed to hunt down the copies within two days.”

“Let me finish,” Amona held up her hand. “You will not be dismissed immediately, and we recognize the difficulty of your unique circumstance. You will need to send us two living references after the exam is finished. And neither can be senior scholar Techatumai.” Amona’s expression was sour, flavored by what was most likely a reprimand from a superior. “This exam is composed of five parts, the last being the supervised story-chase you need Techatumai for. If you manage a passing average of seven-hundred-fifty on all five tests by the time you finish your fourth, assuming you score nothing for the last, you may choose to exempt yourself from the last.”

“Excuse me, Dan Amona,” I frowned at her. “But I’m afraid I can’t produce two living references. My teacher and I moved around too much for me to know any scholar, or anyone, well enough.”

Amona’s jaws unclenched slightly, and the tendons in her neck shrank back beneath her skin. I could not determine behind the reflection of the vid panel on her spectacles, but I suspected her expression was one of frustration. She asked, “Is there absolutely no one?”

I shook my head.

Amona smiled maliciously. “Then Albatross help you, because no one else can. That is, if the Albatross considers you enough of a scholar for its attention. This isn’t the kind of association you can waltz in and join on a whim, Rim Kaya. Your little regard for this causes me offense.”

“I’d like to speak to someone else about this,” I said quietly.

“Then unfortunately for you,” she said, “there is no one else. I’m the only member of the staff you’ll be able to meet.”

I felt dizziness carbonate up inside me. My teacher had told me her manuscript would guarantee me a chance to take the exam at least. Perhaps I misunderstood. Perhaps my teacher meant the manuscript to be presented as a peace offering, and perhaps I should've offered before I was caught with neither supervisor nor references. Or perhaps L. Amona hated me enough that it did not matter.

"The..." I began.

"It will be caught," Amona said. "And put away. Our organization will not be threatened or blackmailed. The ramp's in place, so unless you can provide me two character references after the exams, go gather your things and step off the ship like a good girl."

"One moment, Dan Amona, what about us?" Mon said from behind me, standing on tiptoes so he could peer over my shoulder. He slung his arm carelessly around me. I startled. I was so preoccupied with my own thoughts I'd sensed neither he nor Saresen approach. I wondered how much they'd overheard. Saresen cut between the administrator and I. She wore her tactem smile, with the attention and delight of a raptor over a dying creature.

"I know a loophole we can exploit, Dan Amona," Saresen said with that smile. "I know scholar references are a formality. Any scholar with an ink-eyed coin and cycle of contact with the student could write it. If you're giving her until after the exams, Mon and I can write references for her after we pass because we'll have known her the whole Ogum cycle and part of Neum by then. Slightly backwards, but it doesn't violate any of our rules."

The administrator looked from me to my companions before giving a noise of disgust and waving her small hands. She snagged at my sleeve and jerked me closer. "Don't look smug, Rim. You will still have to make seven-hundred-fifty on the cumulated average by your first four tests. I can count the handful of scholars who have done so in two thousand years."

I was more preoccupied with my companions than Amona's threat as we left her desk. I felt a steep cavern in my throat, and did not trust myself to speak what I wanted. Instead, I shook off Mon's hand and managed a shaky smile. "Don't you mean *if* you pass, Saresen?"

"You'll just have to work harder on our collaborative, then, to pull up our poor rankings," Mon said.

"We're protecting an investment," Saresen said. "And you're going to make it worth our while, right?"

"Though seven-hundred-fifty in four tests means you have to score an average of nine-hundred-thirty-seven-point-five on your first four," Mon said worriedly. "That's a high bar, Rim. There're maybe three hundred scholars who ever scored that high. Do you really think she might've interfered with your supervisor?"

"I'd better be as good as I think I am," I said grimly.

Year 2069, Ogum 25

The journey of the Ogum Quill lasted twenty-six days in total, as it scoured major ports for potential scholar students. On board, students could wait in the anxious space of their bunks or prepare for the story portion of the exam. Most were asked to leave early as their applications were reviewed and rejected.

We cut power two more times due to jackknives, and I played tactem each time. Sometimes, Mon invited other scholar students to join in our games, but I was still undefeated. We did not gamble again, except in single shards or small favors. I was nearly twenty shards richer by the end of the trip. Mon owed me an elaborate meal and the Asieli three songs.

Within the short time we were aboard that ship, I grew used to Saresen's ringing voice and strict schedules and Mon's crude humor. I learned that Mon subscribed to a continental diet

and did not eat fish or bird. Saresen, on several occasions, burst into heated and unfathomable laughter, as if all her repression built into volcanic displays of emotions. I knew her lanternfly was named Fiel.

We reached the final information stage on our collaborative, and began formulating a story to showcase our research. We chose the only-slightly fictional account of a girl who followed a triad of glacefish across the Moland-Tomkol border to where the ice broke and a valley of locust corpses could be seen.

After the first few days of shared company, in the lull between two books, Saresen asked, “You’ve never collaborated before us, have you?” I bit my lip with a grin and shrugged. She continued, “Because that would explain a great deal.”

Mon tasted my walnut butter sandwiches and promptly decided to take over responsibility for my snacks, considering that as payment for lost tactem. I had not known about the drawers of flavoring, nor that students were allowed to request meats or borrow the stove in the ship’s kitchens. My initial impression of his poor pen was false. He was formulaic and had a tendency for exaggeration and cliché, but ironically demonstrated the iron grasp of Hali grammar I lacked. Despite his initial interaction with me, he never once asked about my family. Instead, he chatted about his experiences as a street menace in Hal, and how he never did have a scholar teacher. While I knew the vast majority of his stories were embellished and required proofing, they were bright as sun-stones in the consistency of research.

While I socialized with the other scholar students who entered the exams, I did not form lasting friendships. Considering the circumstances, I thought I did well. I met Lao and Tenma, who were also from Kiin. They knew of my ashline, and so seemed nervous about extended contact. I met Hansil and Moray from Moland, both of whom spoke Ha with a clipped accent I found attractive. Tolly would eat only lamb and hogged showers. Sienne Rores was allergic to

the chlorine in the washes on the Ogum Quill and took photographs of every student on a miniature incandescent camera. Boivi-al, the Cici woman with feathers in her hair and a pair of deformed, vestigial wings on her back, was seasick the entire journey, and lost a quarter of her original weight.

Most of them were awed by my heavily scarred body, especially the calibrated lines on my left hand and the three scars like satellites on my left thigh.

Asieli, the fish people, had the reputation of being the most beautiful human subspecies. The Asieli students on the ship did not disappoint. Patral had eyes so deeply blue the edges of her pupils were unclear. She asked me why I kept my scholar's coin exposed. I'd touched the coin on the outside of my sweater and said, "Isn't it claustrophobic? My bones itch and my fingers shake if I keep it under fabric."

After Patral's slender form, framed with hair the color of jellyfish and foam along a beach, left the room, Mon licked his thumb. "Fresh fish, Saresen."

"You don't eat fish. Oh, oh..." I hid my eyes.

Saresen said without looking up from her work, "Sienne's a little young, but I'd lick Patral in a double. With Miguel, from room seven."

Mon snorted. "Two's a tall order. Fish are slippery."

Of course, Saresen's eyes flared at the implied challenge. "Not for me. Before Intas Elore."

"No commands."

Saresen faked insult. "I'd never use Cae commands for this! That'd be abuse."

"Would you two stop being disgusting?" I hissed.

"Those Asieli and their long legs and skin like water," Mon said dreamily. "Nope, can't stop. Not even considering you're underaged."

I groaned and buried my flushed face in the books spread before me.

Excerpted from: *The Beginnings and the Whereabouts of All Things* by Milam si Sorenti

... *Sun*

The Sunbird is one of two deities of climate, composed mostly of the gaseous element hydras and uhana, constrained in the physical form of a black carrion bird in much the same way Winter often wears the shape of a human. (fd. 1932, Viivella) The Sunbird is cognizant of land-bound incidents, proven by the measured movement of its pupils, (fd. 611, Banfie) but has never been recorded to properly engage with the world below. Unlike Winter, whose annual orbit around the Thumbprint fluctuates each year, the Sun keeps a regimented orbit, with less than a moment's variation each day, which is often made up for in the next. Humans use the slow flaps of the Sun's wings and the blinks of its eyes to track time as they progress through the days. The wing beats of the Sun release a subtle twelve-rank sound which can be heard across the Thumbprint at all times, varying in intensity and pitch depending on the listener's distance from the Sun. As a result, most children past the age of conceptualization can hear and identify time without the obstruction of ambient noise. (founding date unknown, Anon.)

Albatross Landing

Year 2069, Ogum 25

“I can’t wait to be home!” Saresen shouted, startling me. She stepped from the library and flung her arms wide into the salty wind, lifting her face upwards with an unrestrained grin. She looked like a child. Mon pushed me from behind so I climbed onto the deck. He grinned as well.

On deck, supervisor Amona handed each scholar student an entry card. When I attempted to take a card from her, she clung on. I pulled twice before loosening my grip, letting my fingers linger more tentatively. Amona scowled at me before releasing the paper. I took it and felt my hands shake. On the cards, we filled in our name, age, ethnic, intents, and the period we would stay in Loa. The back of the cards displayed maps of Albatross Landing, with the thickly forested residential areas arching like an umbrella over the north end of the city and the mountains spiking up the west boundaries and crawling over the lip to the underside of the island. An addendum required more specific scholar student information like the range we could be removed from our coins, our S.M.R. scores, and such. I noticed Mon and Saresen were given cards as well. When I asked, they explained the cards served as compass, triangulating their upper left corner towards the center of the city. I slipped the card into a breast pocket.

Mon and Saresen were both familiar with Albatross Landing: the first port city of Loai. They considered it home. I had never laid eyes on it. The surgery which bound my mind to my coin had been done in a small alley hospital in Ciricici. The doctors there were skilled but retired. As we neared the landing, I looked up and tried not to let my wonder show.

We approached Albatross Landing in the rainy season. While the Sun was visible, it was wrapped in gray clouds as if it had crawled out from the gut of a volcano. And beneath the lava and smoke in the sky, Albatross Landing was a sharp contrast.

The Thumbprint, after all, was deep and endless with more stories than any scholar can know. I'd seen Molas cities of glass, Seb cities of rusted metal and gunsmoke, Tomkol cities tunneled deep into volcanoes and crystal caverns, and Asieli cities crusted in the corals under their galleons. I'd not seen a city quite like Albatross Landing before.

If I had to compare, Albatross Landing probably most closely resembled the cities of Ciricici, which were opened in great clawed cliffs on beds of sun-stone veins, with translucent wing lines instead of roads laced between the entrances. Albatross Landing was far more lush, far wetter, and covered in far less bird droppings. When the Loai scholars first found their home upon the tropical Loa islands, they knew the substrates beneath their feet were rich in earth-stone: the same substance used to power vehicles and levitate Molas landships and boards. What they did not know was that their land was so rich in inactive earth-stone that the islands lifted from and sank into the continental shelf in century-long cycles. Loa spent the majority of its years in the sky, though the colored climate of the area prevented any views outside the Thumbprint. While the floating geography suited Loai purposes, the small island which held Albatross Landing served as a port to the rest of the Thumbprint and needed to remain rooted. The behemoth land floating above us was snaked with thick, rusted chains, held to the sea by massive anchors embedded in the sea floor far below. A single chain led upwards from Albatross Landing into smoky clouds, where another city was concealed. All I could see of the city at first was the substrate, red with iron and pulsating with the dark lines of earth-stones. Black roots tangled among the chains, pushing upwards into plumes of dark red leaves barely visible over the edges of the island, touching the sky. Water dripped steadily from those roots. I felt the droplets land on my face as the Ogum Quill passed under the city. I laughed, delighted and terrified.

“That’s fine on this side of the island,” Mon warned me. “If you’re ever under the south, close your mouth and open an umbrella, since that’s where all the latrines in Albatross Landing pipe to.”

“Duly noted,” I said.

With black bark and dark leaves cresting dark soil, chained to the ocean and wearing fog as a cloak around it, Albatross Landing resembled the great, lumbering beasts from my children’s stories: the ones which fed on human flesh, and could only be brought down by the combined efforts of a thousand hands and spears and chains. Its scent was of autumn and metal.

The ship came to a stop near one of the island’s great anchors. The chain was nearly as wide as the ship was long. I reached over the deck, but could not touch the links. The sea under Albatross Landing was more green than blue in the city’s shadow. Suddenly, a flock of dragonflies erupted from the waves and hovered by the ship, shaking water from their long wings and spraying us. Everyone else seemed to know what to do. The students and staff displayed their entry cards, disembarked the Ogum Quill and each mounted the thorax of a dragonfly, with their feet extended forward around slender insect necks. The dragonflies, gem-colored eyes gleaming, lifted upwards to the city. Mon and Saresen stared at my agitation, but didn’t comment. Instead, they waited wordlessly until the lagging green dragonflies with saddles flew by before beckoning me on.

Tell true, dragonflies did not make bad mounts. Better than seahorses and certainly better than ostriches. Their flight was abrupt but never too unsteady. While I reeled from sharp jabs of vertigo, my behind never left the seat. The wind from their four wings rippled through my pants and we flew so fast I became breathless and dizzy. My hands were white upon the saddle pommel and I wondered how one could possibly ride without one. I looked down and my feet dangled

over the waters and the blue sails of the Ogum Quill. I panicked for a moment as a shoe fell loose and slipped off my heel. I pinched at it with my toes and clung on.

Mon finally snickered as we crested over the edge of the city. “You can board in twenty-notch weather on rivers of snow, with glacefish, and you can’t handle dragonflies.”

“Mon, shut up.” Saresen wheeled her dragonfly under mine. “You can drop it, I’ll catch.”

Flushed and embarrassed, I loosened my foot and let the shoe fall. Saresen snatched it.

Buildings in Albatross Landing were sharply dichotomized. Some were built into the blackwood, gilded with leaves and windowed with insect wings. The rest were built from white granite and bone, strictly geometrical and a studded with precious ores. Elaborate Hali scripts and pictograms were carved in the wood or metal or bone frameworks of each building. The streets were meticulously cleaned. The skies above Albatross Landing were filled with lanternflies, buzzing against oncoming rain and flooding the city with light in the volcanic evening glow. My dragonfly stopped to snatch at a passing fly, throwing me forwards in the saddle. I let out an undignified yelp and nursed my stomach, which would undoubtedly bruise. I always bruised easily. All manner of injuries were common with me.

We did not fly far, only to a pentagon-shaped gold-white building just beyond the island’s edge. It was not particularly impressive in size: about the width of a Molas primary school. The face of the building was hidden by the top branches of blackwood trees, and it was surrounded on all sides by at least half a whale of thick forest. Mammon tusks were used as the five support pillars, which arched towards the center of the building, almost meeting in the middle, but interrupted by a wide circular window covered with butterfly wings. Light cast a blush on the pale walls. A few hundred books sat in thick transparent plastic bags by the door, tagged with plastic ribbons. Aluminum vents pushed out between branches, blowing pale smoke-rings into the sky

that smelled of herbs and a hint of grease. The path leading up to the pentagon building was green stone, gleaming in the humidity. A tall albatross statue had been set down on the path to the door.

Once we set down, I grabbed a handful of the braided hair along Mon's spine to steady myself. Mon made a mock sound of pain but did not shake me off. Saresen handed my shoe back and I slipped into it in silence, infinitely glad my collaboration partners were tactful enough to remain silent.

I balanced myself on a green stone along the path. Mud wedged around me. The city smelled of a mixture of water and trees and mushrooms and spicy foods. I'd feared sickness on Albatross Landing, but other than the soft movement of the wind and the occasional deep-voiced chime of the chains below, the island felt like solid ground.

"Except during storms," Mon said. I wondered if he read my mind. "We get some that last for days. Sways the whole island and turns it five or six times. The chains become tangled. Everyone gets motion sick during storms."

"Sounds pleasant," I said breathlessly.

Mon and Saresen led me into the pentagon dormitories, which were almost exactly like the dormitories on the ship except twice as large. Each room held four bunks and there were far more beds than students. This time, I shared bunks with my collaboration partners, using an empty room nearby to draw my pistols. Quip, strangely, roomed with a fellow Seb woman he did not get along with. I displayed my guilt at abandoning him so clearly Mon jested that perhaps I was in love with Quip.

Later that night, the staff of the ship wheeled in my old, red motorcycle. I immediately fell upon the vehicle, cooing at it, calling it sweet and good and brave for spending all those nights alone. The motorcycle preened. Mon made the off-hand comment, "You like your relics, don't you."

Rain came in the evening, tapping against our windows and sliding down the insect veins. I counted the veins as we ate a quiet dinner in our bunks.

None of us slept well that night, interrupted by anxiety and each other's company. Four times, Mon asked whether I was frightened. He would've asked Saresen the same except she cut him off each time. He also ground his back teeth and ate handfuls of buttered and breaded gnats. Despite this, I found Saresen more distracting. She stretched on her side in the bunk below me, breathing in short, aborted breaths and turning precisely once every blink: this I knew because I listened to the time. When Mon spoke, she gave clipped and angry responses. With the two of them in the room, or perhaps all scholar students were equally nervous, I could not even lull myself to sleep listening to the steady downward flaps and the slower, subtler blinks of the Sunbird on the other side of the Thumbprint.

Finally, when Mon finished his bag of gnats and began grinding his teeth again, I flung my sheets back and tossed my pillow at him. "Mon," I hissed. "Listen to the Sun! It's three wing flaps from dawn. Maybe you can perform with so little sleep, but I can't."

"Sorry," Mon muttered. After a moment, my pillow flew back upwards into my face.

And early the next morning, before any of us had enough time to rest or prepare, the scholar's examinations began.

Excerpted from: *The Beginnings and the Whereabouts of All Things* by Milam si Sorenti

... *Blackwood*

Many consider blackwood to be an extension of the world tree Atirel, to the point where its lumber is sold for the price of kingships under the name 'godwood'. (cd. 302, Kbsoi) This is a common misconception, disproven when a two-hundred-whale-radius was dug around Atirel's base. (fd.1592, Ojbsnerd) While superficially an identical species to Atirel, blackwood matures and grows as any other wood might. (fd. 469, Bcklweor)

Blackwood does, however, possess godly qualities. Blackwood were native to Cae peninsula and later transplanted and successfully cultivated in Loa. They require soil with at least fifty-parts tassium, thirty nittin, and thirty-two pherrus, along with high components of iron. Above all, they require land with a strong divine presence and no competition for light or water. (fd. 17, Numgala) If grown successfully, a grove of blackwood increases the fertility of its soils, transforms the climate above it, and perhaps most astounding, allows poorly spoken Cae to take effect as properly spoken Cae would. (fd. 110, Treli) Most speculate that Cae was originally a language developed by blackwood. (ct. 469, Mvinesx) Many kingships around the Thumbprint have attempted to cultivate blackwood in their own lands with little success.

The value of blackwood is in living trees, as its lumber and tissues are of little economic use, lacking luster and durability. (fd. 5, Numgala) They are occasionally used in ornamental furniture, possessed only by those who can afford their exorbitant prices.

Coins and Dowsing

Year 2069, Ogum 26

The first test found us just after dawn, bleary-eyed and swaying in our shoes. The canteen gave us large mugs of coffee on a white tray, with small packets of spice to one side. They offered only one spice flavor; Butterfly in Spring, which was rumored to boost mental activity and concentration for short periods of time. Though I wasn't a personal worshipper of cool spice, theirs was a higher grade than the cheap mixes I bought for myself. I waited until none of the staff watched me, and then scooped a dozen into my deep pockets. After a slender breakfast of oven roasted crickets, particularly plump ones as large as my head, we were ushered out of the pentagon dormitories and into the clearing out front.

There, each scholar student touched the lowered head of the tall albatross statue before settling in its shadow. I wasn't sure why the others did this, since I was pretty sure the Albatross itself was not watching, but I mimicked their reverence so as not to stand out.

Light came over the treetops, with the Sunbird appearing to the south like the molten birth of an infant mountain, full of smoke and pulsing flame. Lifted into the sky, I could more clearly make out the sleek black beak and half-lidded eyes. The red morning light spilled over the red leaves of the blackwood, the blues of the tower ferns, and the greens of the interspersed walnas and oaks. The early flaps of the day smelled different in Albatross Landing: a little less wet, and a little saltier, without the tinge of roasted meat or pastries turning on their warm stands. I shook sleep from my eyes and wiped a handful of dew on my eyelids.

The examination staffs were punctual, pulling up on a triad of dragonflies in time with the downbeat of the Sun's wings. Amona and two other scholars dismounted: a man and a woman, both stout and powerful-looking. A medallion carved in the shape of an albatross in flight pinned a blue sash across each of the scholars' chests. Amona wore well-fitted white robes instead of the

dusty leather jacket from the ship. She wore her red hair up and looked far more skeletal than usual. I cringed as I realized she might've been more important than I realized.

They gestured for us to remain seated, and joined us in the shade of the statue. "Good morning, students," one of the other scholars began. She was built thickly, with a dark, shaved head and an elegant and aristocratic accent. "My name is Rigma of Corek. To my left is Lisarel Amona and Cieger of Corek. Dan Amona will guide your physical examination and Don Cieger your interview. You'll be under my care today, so let's get along."

The introduction was so formal I felt an urge to bow and shout "Good morning, Dan Rigma" as I was schooled to do as a child.

"Before we begin," Rigma continued, "we must explain several rules to you. If, at any point during the examinations, you feel your life is in danger, you must call out the Cae word for 'help' and I assume all present know the word. We will remove you from the situation as soon as possible. That said, the scholar's examinations will cause physical and psychological discomfort and even superficial injury, which is a natural and necessary aspect of our trials. Calling for aid effectively removes you from our examinations. You will not be rewarded for actions which unnecessarily risk yours or your companions' lives, even for the sake of passing."

"Does it matter if we cannot pronounce it? The Cae word, of course," Quip asked.

"If you have no confidence in your grasp of key words of the Cae language, and you do not think they would take effect even in the presence of the blackwood," the scholar Rigma replied, gesturing around her, "then you may not want to take this test." She and the other scholars waited for a moment, as if expecting the crowd to dissipate. Instead, we all sat there, solemn and frightened.

"You will be observed closely during this exam even if it does not appear that we are nearby," the scholar Rigma continued then. "While accomplishing the tasks set before you is a

prerequisite to obtaining your license, it does not ensure it. Your scores will be based upon your process: your actions and reactions. You must both pass the exams and achieve an average score of seven-fifty across all five components.

“Now, to prove your readiness for scholarship, I want you all to take out your coins and place them in the yellow tin we shall pass around.”

At first, the scholar students glanced at each other, uncertain.

I frowned and lifted my coin over my head.

“Oy,” Mon hissed. “You’ll really get hurt one day, being so careless with that.”

“Well, scholars who don’t take risks soon grow accustomed to mediocrity,” I quoted my teacher. I looked around at the hesitancy on other scholar faces and laughed. “And the fact that we had this thing made in the first place means we already took the risk. This is nothing we haven’t already done.”

Around me, the scholar students began to unbutton their collars or pull open their back pockets. The majority of us wore our coins around our necks, close to skin and usually out of sight. Despite my bold words, I swallowed and pressed a hand to my stomach when the yellow tin was handed to me. A familiar phantom sickness pressed into my gut. My coin bounced out, tipping over the side of the tin and back onto my lap. I gripped it tightly by the chain and lowered it in again. Once all twenty-six coins were collected, Rigma took the tin, immediately shut it, and threw it upwards.

I wasn’t sure if I cried out. I knew several of us did. An oversized gasoline dragonfly flew overhead, gleaming blue and sleek. It caught the tin of our scholar’s coins and clutched it against its thorax. Cackling at us around its elongated mandibles, the creature rose upwards and away. The pressure in my gut was tremendous, punching upwards into my throat. To my left, Hansil bent at his waist and spat coffee and cricket at the talons of the albatross statue. Sweet, soft-

spoken Sienne clawed at me from behind, hands groping upwards for the vanishing insect. And Mon, eyes bloodshot and mouth twisted into a snarl, wrestled Sienne off my back, shoving the short girl back against the statue, grinding his kneecap into her stomach.

“Stop it!” Saresen shouted. “This is a test! A test, Mon! Calm down!”

“Your first task,” Rigma began, ignoring the chaos of the students around her, “is to find your coins. They will be divided and hidden throughout these blackwoods. At the edges of the forest, you’ll find territory normally used by the mineral department. Your coins will not be hidden so far away, so observe common courtesy. For those of you unfamiliar with these areas, be aware that it is not entirely tame.” These were, apparently, the scholar’s parting words, because all three turned and aimed a curved trajectory into the pentagon dormitories, around the Mammon arches on the left side, in the direction of the canteen.

None of the students moved for a moment. I closed my eyes and attempted to forget about my body, as my teacher had taught me through repeated practice. When I looked around, the other scholars were still too debilitated, with tears and pressure filling their eyes and trying to catch their breaths against the amputation of their minds.

Saresen recovered first after me, straightening to her full height and touching Mon and I on our elbows. “We need to calm down and stay together or it’ll go badly,” she said tersely. “If even one of us catches colds or rania from the building stress, it’d be a disaster.”

“They said, they said!” Mon panted, and then smacked both of his rough hands to his cheeks. “They said they wouldn’t cause injury, well crippling injury, or deaths, that means they have to keep the coins within maximum safe distances from us.”

Several of the scholars began to lurch towards the direction the dragonfly vanished. I scrambled up the albatross statue, planting a foot along its dipped head and the other on the hilt

of a wing. The movement left me breathless and light-headed, but I gathered enough composure to shout out, “Don’t! We should stay together! Does anyone have a map of this area?”

All but the handful that left most quickly turned back. A young Asieli I did not recognize dug into a pouch at his belt, producing a small cloth map. He waded through the crowd to me, beautiful face pinched and worried. “I got this from the canteen,” he said, flushed either from embarrassment or physical discomfort. He shifted from one foot to the other, shaking badly. “It’s only a map of the b-buildings, and doesn’t show any of the wooded areas.”

“It’s perfect, Miguel,” Saresen told him, who flushed and I wondered if she’d managed to bed the Asieli after all. Saresen smiled at me and scowled at Mon. “How far away can they safely keep the coins from us?”

Mon, who was rocking his head back and forth in agitation, rolled his eyes skywards to think. “Half a whale?”

“I could have told you that,” I said. “Mon, we need more precise data.”

Before Mon could reply, Tenma shrieked nearby, holding his plump shoulders with his short fingers. Tenma’s long eyebrows and the hairs at his wrists stood straight up, and the blue bandana around his short hair was wet with sweat. Ink poured out of his loose sleeves, pooling on the ground by his feet. For a moment, I was afraid he would keel over and froth at the mouth, bleeding from his nostrils and eyes, but while his nose and eyes were red with engorged blood vessels, he did not fall over. “I...” Mon said. “I can’t think. Forty-seven-o-six-nine-one-four parts of a whale. Average. Close enough to radi.”

Saresen paused. “Bird gut, I can’t scale that in this state. Mon, sorry, you’ll have to do it.”

“Shove off,” Mon said, but he checked the map scale and took his trembling fingers to the surface. I watched his scrunched face for a moment. The majority of the scholar students had

calmed and gathered around us. Finally, Mon traced a circle in the map and flung it at me. He clenched his hands to his side, bloodshot eyes looking anywhere but us.

“Alright,” Saresen said, projecting her voice so the crowd could hear. “This is the area. We should travel in pairs or threes, and the spiders and cats should leave us alone. I know it’s hard to think, but be careful of snakes, the beetles, and especially the ants.”

“There’re no snakes in this area,” a very young student with a necklace of rubber skulls said. He had a nervous look about him, quivering as my left hand did after a long pistol-drawing session. His dark eyes slid between Saresen and me like a parakeet. His mouth was still filled with unnaturally white infant teeth. “None venomous anyway.”

Saresen made a sound of frustration. Another student quickly amended. “It doesn’t hurt to be careful. The hunter spiders will usually leave humans alone, and I brought copper fruit from the kitchen in case our test took place in the forest. If we rub those on our necks, the scent should keep the cats away as well. So we just need to watch ants.”

Saresen nodded. “Anyone have any advice before we scatter?”

“We shouldn’t,” I said quietly. When everyone turned to me, I swallowed and spoke up. “I mean, Mon recited and mapped an average, which means realistically, the coins should be closer than this. I doubt the dragonfly knew each coin apart from the other. Does anyone know if their safe distance is really short?”

“Mine,” Tenma spoke up, grimly. “That’s why they asked us to fill out the distance in the application. They were planning to do this all along. Mine’s somewhere in the vicinity of twenty-nine parts of a whale.”

Saresen was right, it was difficult to scale. I knew that given a few blinks to calm and calculate, I could’ve done it, but after I handed the map over, Mon paused barely a moment before drawing a second circle inside his first.

“We’ll start here then?” he asked.

“Right, and we shouldn’t all head off,” I said, allowing as little emotion to enter my voice and face as possible. “They mentioned that we’re being monitored. If we all scatter, they might calculate that it’s safe to move our coins further out, and we won’t be constrained in this circle anymore. At least some of us should stay at this location, so they’ll keep the coins close. Half of us should go look, and then come back to switch in a flap or two, whether we find anything or not. At the same time, they should record geography, ants, and any clues they might encounter.”

“If this is a test,” someone said loudly from behind me. It was a woman’s voice, but I could not tell who. “The people who search will be graded higher. Who gets to go first?”

“Oh for the Albatross,” Saresen snarled. “That doesn’t matter! Whoever can hold their cool despite being sick should stay first.”

We were left with ten students, while the other thirteen trudged in all directions into the forest. I noted that Quip and Impulse both prowled in the direction Sienne Rores took. Mon, Saresen, and I stayed, but I could tell by Mon’s constantly tapping feet that he wished he was out searching as well. I sat by his side and tugged on a haphazard braid. “Calm down, Mon.”

“I might throw up,” he said. “How are you so bird-droppingly energetic? And cheerful?”

“Well,” I said softly. “Perhaps I know where my coin is.”

“There’s something wrong,” Saresen said. She clambered up the statue towards Mon and I. She appeared to have recovered significantly. It suggested that her coin was closer than mine. Or perhaps she practiced as well. Several of the other students looked up at us, but were despondent enough not to venture closer. “What you just told them was false. Maximum safe distance was calculated from this location, and the examiners could not have moved the coins afterwards. Like you said, it’s doubtful the dragonfly hid the coins individually. If they moved

the coins in a direction opposite to where its scholar searched, and that scholar coincidentally had a short range, that'd be fatal.”

I swallowed. “Yes. Our coins are not going to be moved. And they're underground.”

“Then why...” Saresen's voice trailed off. “How can you possibly know?”

“This isn't a scavenger's hunt, or a logicks examination,” I explained, keeping my voice low. “It's a dowsing test. That means the most efficient way to find our coins is not to physically search, but to access that mental connection we share with metal. I can feel mine, vaguely, and I feel cooler and damper, with no air pressure. I smell decomposition without rot. My coin might be inside a wet, dead tree, or underground, or any number of places. But what is the one place none of the other scholars will be searching?”

Mon shook his head, looking vaguely green, but Saresen made the connection. “You mean in an ant tunnel, which means if all of our coins are in similar hiding places, none of the people out there will find their coins.”

“Exactly,” I said.

“Why didn't you say anything earlier?” Saresen asked.

“Because this is still a test, and while I know it's not exactly a competition, I have to get at least nine-hundred-thirty-seven-o-five,” I said. “When the others return, if they return, and act like scholars should, they will have mapped out the areas where ant tunnel entrances and foraging paths are. We could then use those and go find our coins. That means barring anyone who can physically search and mentally dowse for their coins at the same time, or anyone else who formed this connection faster, both of which I doubt, we will be the first to find our coins. What you two should do is try to feel out your bonds and make sure your coins are underground too. I strongly suspect that is the case, but we should be sure.”

“Kaya, that's terrible,” Saresen said stiffly. “That's the most selfish thing I've ever heard.”

I panicked a little. “I’m taking the exam with a severe disadvantage. You know that. Shouldn’t I try to give myself a chance? Shouldn’t I do this?”

“Maybe they’re testing our ability to work together,” Saresen said. “Maybe they’re testing our ability to share information. Have you thought of that?”

Though Saresen was smart and focused and someone I respected and liked, I couldn’t help the mocking laughter which bubbled out. “Saresen, scholarship is the furthest thing from information sharing! Our coins were made to absorb dangerous information from our minds and keep them locked away so even we can’t access them. This whole organization, from the licensed scholar to the winged serpents and the Albatross, is founded on the chase for and withholding of information from public domain. Sharing is not a quality they look for in scholars.”

“That’s so utterly cynical. I don’t even know how to respond!” Saresen’s voice rose to a shout.

Mon cut his hand between us, cradling his temple with the other. “Stop fighting. Birds and snakes! What’s wrong with you two?” He took a deep breath. “Kaya, did you think about this? If our coins are in tunnels, the entrance could be anywhere. It doesn’t have to be where the other scholars are looking. It could be outside our mapped circle.”

“No, it can’t,” I said. “They can’t take the coins outside the circle we drew at all because we were all here. We would’ve collapsed and experienced strokes or seizures, and none of us did. I can even tell you that the entrances are right on the smaller map circle, right on Tenma’s range, because I think his loss of control, with the ink and the bloodshot eyes, from earlier, was when the coins entered the tunnels. And he recovered afterwards because the coins curved back towards us underground.”

Saresen and Mon looked caught between appreciation and disgust. Finally, Saresen said, “If our coins are in ant tunnels, that’d be far too much danger for a simple exam. None of us are equipped to deal with legions. I think you’re full of wind.”

I shrugged.

Mon said, “I think Kaya’s right, Saresen. I can’t feel my coin, but I think the reason everyone shook so much was because our coins were cold.”

“I’m going to tell the others,” Saresen said.

“Sure,” I said. “Tell them to stay around until the others get back, though. It’s far more efficient to wait for information because we can’t cover the entire circumference in two flaps.”

Saresen licked her thumb and flicked it towards me in an obscene gesture. She was angrier than I’d ever seen her, and I wasn’t sure how to react. I didn’t think anyone other than my teacher had ever concentrated so much fury at my person before, and my teacher’s anger was that of a parent for a child, with repercussions of punishment instead of the breaking of a relationship. Mon was unhappy as well, but he sat by my side, holding his arms stiffly across his chest.

I watched Saresen relay the information in animated gestures, and immediately, three of the other students stomped to their feet and took off

“I just...” I sagged. “I didn’t know for sure until they’d all left either. I needed to dowse in silence, and they were so eager to go. I didn’t think...”

“No excuses,” Mon said gravely, “just don’t do things like this again. If she’s still angry later, I’ll speak to her, but you really shouldn’t use and manipulate fellow scholars like that. It doesn’t gain you any friends.”

His words felt terribly unfair. Students were not scholars, and wasn’t the one who was concerned with test grades earlier just as selfish? And she didn’t have to score nine-thirty-seven-o-five. A passing seven-fifty would’ve sufficed for her.

When, at the designated time, only nine of the sixteen scholar students returned, I wanted to point out that those still in the woods searching were selfish as well, but held my teeth still at Mon's warning glance. None of them found their coins and several smelled strongly of sweat and vomit. Quip smelled a little like blood. Their complexions were sand-rough, and they all cringed at the light in the clearing. The foraging students had searched the inner circle extensively, and found only two tunnel entrances, marked by insect and small animal corpses, on both sides of Tenma's safe range. Saresen told them that it had occurred to us while we waited, that our coins might've been underground.

Several appeared grateful, but a few frowned, giving suspicious glances at those who stayed behind. Saresen did not mention my name and seemed not to notice the hostilities aimed at her, but the hard edge remained in her voice. So I said, "There're still two options. I think it's the one at thirty-two degrees to the east."

"Why?" the boy with the skull necklace demanded. He was forced to look up to meet my eyes.

"I feel it," I said simply. "My coin is in that direction."

"That's not a reason," he said.

"No, Kaya's right, Ueshar," Saresen said. "Because the east entrance was the one Tenma found. That means Tenma's coin is somewhere in that vanned section of the circle, or he would've collapsed. The coin could have entered the south entrance and travelled north and east to that position, but that would mean Tenma cannot access the entrance to his coin at all, and that he would be set up to fail. The scholars would not do something so unfair."

"I'm glad my short safety range is providing so many clues," Tenma muttered.

"And," a student I did not remember a name for suggested. "We saw signs of life by the southern entrance. It was an active colony. They said our lives would not be in danger. Entering a

colony with a legion of bullet ants is practically suicide, since none of us brought any equipment to handle them.”

“I agree it’s north,” Quip said cheerfully. “I felt the most awful sickness come over me when I searched the southern borders, and my range isn’t great either, so it’s north.”

“Circumstantial,” the boy Ueshar crossed his arms. “Could be a bluff. I went north and it wasn’t safe either. We could smell too much decomposition. That’s not natural. We have no inkling what to expect.” Arguments ruptured under the canopy, scaring off cicadas and sleeping lanternflies. I opened my mouth to speak, but a wave of nausea hit me with the noise. I leaned heavily against the albatross statue.

“Stop squabbling, birds,” Boivi-al said quietly. Sitting cross-legged on the ground, she appeared far more winded than the rest, and her dark skin gleamed with sweat. She dabbed her cigarette on the bottom of her shoe. I gasped at the thin chain around her neck, disappearing into her robe. The vague shape of a coin was outlined against the front of her shirt. I shook my head and breathed out slowly. I’d obviously underestimated Loa: the exam, as well as the students who gathered here. Boivi-al was a few flaps ahead of everyone else.

“Stop it! Stop!” Saresen raised her voice. After a moment, the crowds quieted.

“It’s north,” Boivi-al said into the reinforced silence. She did not elaborate, but none of the others raised any more objections. Not even the boy. I was not the only one to notice the coin around her neck.

And so the sixteen of us headed north and east towards the abandoned ant tunnels. Boivi-al ambled behind, despite having already found her coin.

There were four species of potentially dangerous ants in Loa. The one with the highest kill rate was probably the ghost ants, who were slightly smaller and dwelled in the tree canopy, launching down to stun and incapacitate prey from their branches. Rock ants fed predominantly

on decomposition, and were only dangerous if anyone misread their signs and wandered too close to a colony entrance. The bullet and smoke shared many characteristics, identifiable only by the chemical components of their pheromones and the fact that they could not be interbred.

Unsurprisingly, my mind filled with images of ant atrocities as we walked. How they laid traps for larger animals, clamped around their legs to hold them still to be eaten alive. It seemed every shadow under the trees contained their antennae and spiny limbs. Roots crawled out of the bases of trees, root filaments moving gently in the humidity. The touches of the vegetation upon my ankles sent fear spiking in my mind. As the flap passed slowly by in our procession, my apprehension grew.

I knew we were close when my foot kicked over a small bird skull, with an aura of egg shells around it. Pellets of dead animals were littered with an artist's carelessness across the landscape, each nestled halfway into the earth. From these pellets, horns and carapace protruded, each picked completely clean of flesh and moisture until the bones were white and dry and the carapaces brittle and flaking. I pressed my hand to the pistol hilt at my waist, nestled just above my hips. Some of the beetle legs were thicker and longer than my legs.

Ueshar, the boy with a necklace of skulls, stopped so abruptly I trod on the heels of his shoes. He sent me a scathing glare and mouthed, "Watch your stompers."

Quip saw our interaction and laughed. "Oh, kid, sheath your teeth. The colony is abandoned."

"Yes, you can tell by the gradients of the soils," Saresen said. "The top soil's dry as the bones here. And the temperature vents are collapsed too. There's been no new activity here for at least a season."

Ueshar lowered his head and stomped ahead a few paces, but I could tell from the tightness of his jaws that he was not reassured. I didn't let go of my pistol either. Though Quip

was a Seb, and all of the scholar students were well read, I'd met enough ants in supposedly abandoned colonies to know better. Ladies took all of their legions with them during exodus, except when they didn't. I didn't want an argument on the nature of minute possibility and Loritan's Perfect Rule, so I said nothing.

"Still," Quip said as we formed a half circle around the collapsed tunnel entrance. We batted soil aside until all but those with the widest girths could fit through. "I think Impulse and I should drop in first, just in case." He gestured to the Seb student he roomed with. "If, that is, you can fit," he added.

Impulse licked her thumb at him, cracked her large fingers, and slipped down the edge of the entrance, carefully popping her wide shoulders under the ridge, and dropped down into the dark. The bottom was not far below us. The light of her sun-stone wavered and flickered, bringing the dark soil into view as she descended. The soil she landed on, though, was wet and slick and steeply angled. Quip followed, pinching his nose and jumping straight down. The soil swallowed his slim form.

His soft, feline landing was quickly followed by a garbled scream. I launched myself at the tunnel, pistol unsheathed. "Quip! Quip!" I whispered inwards frantically. "Impulse! Spit!"

The silence was broken by a bark of laughter, and before I could fathom the possible joke, the others around me laughed as well. Ueshar, face pale, was the only one who found the humor as distasteful as I did. Mon clapped his rough hands on my shoulder several times, holding his other arm to his chest to contain mirth. "That was an epic reaction," he choked. "Are you not in love with Quip after all, Kaya?"

From within, the two Sebs held up their sun-stones and I could see their grinning faces.

"It's fine, Kaya," Quip said, still chuckling. "There's enough room and everyone can come down. Sorry, joke was ill played."

“That’s right, it wasn’t funny,” I grumbled. With my pistol sheathed again, I lowered myself over the ledge, shoes scrabbling at the tunnel interior until it found a tentative purchase above bunched soil and what must’ve been ant excrements because the grain were a thicker size. I shook off Quip’s hand and landed, jerking on a root to stop my descent. “That wasn’t funny at all,” I told Quip, who grinned again.

“I already checked. Keep going, there’s nothing except bad air for a while,” Impulse said. I’d not heard her speak before, and her voice was clipped and uncomfortable.

We all dropped in carefully with lit sun-stones, and were reassured that our logicks were correct because nobody collapsed from moving past their safe distance. The ceiling was low and coated with pinworm holes and tendrils of roots. I had to walk bent, and my knees and waist burned at the posture. It smelled wet and the walls were the clammy cold of nervous hands. The ground underfoot was soft, sinking in deeper at the heels of our boots than at the toes. Mon and several others cursed at their inadequate footwear. The boy Ueshar kicked up dirt as he walked. From the entrance, we turned back south-west, towards the direction of the albatross statue, and ducked through several blinks of straight tunnel with lit torches before the tunnel abruptly split into half a dozen side passages, leading upwards and down as well as horizontally. Two of the tunnels were too small for us to enter.

“Where to?” Moray asked, holding the sun-stone in her torch to her face.

Stroking my sun-stone dimmer, I took several steps down the right tunnel with my eyes closed, and then the left, up, and then the center, searching for that bright spot in my mind where my memories and sleeping self radiated warmth. Twelve-degrees left, from the middle-down pathway.

But the question was directed at Boivi-al, who walked behind us. She breathed out through thin, pinched lips and did not answer the question. “I found mine to the left,” she said lazily, with her hands in her pockets.

“I think I feel mine. It’s faint, but I think mine heads upwards again,” someone added, his voice disembodied in the back of the crowd of students. A chorus of suggestions echoed in the long tunnels.

Several began to peel off towards the left path, which led slightly upwards and the air smelled fresher. The steady touch of my scholar’s coin tickled my mind, and abruptly stabbed a thick, icy fear into my thoughts.

“No,” I interrupted. “Anywhere but left.”

Hansil gestured to the woman slouched against the wall beside him, whose deformed wings cut uncomfortably from her shoulders. “Boivi-al said left,” Hansil said, a little annoyed. “And regardless, from a navigation perspective, it’s best to explore side passages. Less chance of becoming disoriented.”

“That’s a moot point with scholars,” I argued. “We don’t get lost easily. We should go middle.”

“Left,” the other scholar student challenged. “Unless you know something.”

“I feel something,” I said.

“Kids!” Mon exclaimed. “We don’t have to pick and choose. We’ll split and go separate. Alright?”

“I’m going left,” Saresen said. I wondered if she was still angry at me.

“Then I’ll follow Kaya for a bit,” Quip shrugged.

And that was perhaps the worst scenario: splitting up the Sebs. I shook my head. “No, if we’re splitting up, then I vote we go left.”

“What are you, polarized?” Ueshar muttered, not so quietly. He glanced uneasily around him, chewing on his bottom lip.

The left path was long, and my heart pounded harder as we moved. My anxiety must’ve caught on, because I caught more than one scholar tensing their shoulders and reaching for any weapons hidden at their waists and backs. Even before we reached the end of the tunnel, the scent in the air changed: a sharp tinge of acid and the ripe, wet scent of decomposition. The scholar students looked to each other, and it was Boivi-al who finally laughed with her wings. “Shall I go first, children?”

Afterwards, hesitation was no longer an option.

A little ways further, the tunnel opened up into a vast underground dome filled with ant corpses, each opened from the thorax and soaking the earth with the stinging scent of alarm. Around me, all the scholars drew a collective breath: some in horror, and some in excitement. There must’ve been a legion of a few thousand ants littered in that room, embedded into the walls and dangled from the ceiling above. Ueshar gave a whimper, and several held their hands over their mouths. A pale dusting of fungi could be seen around each dead joint. Stabbed through the heart of each ant corpse was a single white fungal stem shaped like a sword: balmung.

“Spit,” I said. This time, my sentiment was echoed.

“Our... coins might be in this mess...” Tenma stuttered.

“Who would be that sick?” Saresen said, dry-heaving against her forearm. “We can’t search this!”

I wandered around the right side of the room, stepping carefully to avoid the jagged edges of carapace. My coin sang like a fire warning in my mind. I knew mine was still a fair distance away, and the scholar examiners most likely wouldn’t have scattered the coins among corpses.

The thought brought nausea to my mind. I glanced at Boivi-al, leaning against the cave wall behind us.

With corpses piled around her, the colony lady's long, rotting body was pressed against the right side of the room. Her head was the size of my torso, with her mandibles held slack and nox fungi already growing in her compound eyes. The bulge of her abdomen was obscured by the corpses above her, but her thorax was chewed through and she lacked an antenna. She, as well as the rest of her colony, had obviously been dead for a long time.

Behind me, the scholar students still talked, but the tone had shifted. "But ants usually detect balmung fungi before it becomes so bad. They'd usually kill and quarantine the infected."

"Unless the one infected was their lady, you think?" Saresen asked excitedly. Her voice was raw and lacking in its usual composure. Something in it stirred an itch in my fingers. I couldn't help but also turn towards the corpses, taking note of the pale color of the fungi against our sun-stone torches. Without consciously deciding to move, my fingers were stretched against cold carapace, dabbing at the edges of balmung with my nails. Saresen's voice was a tune in the backdrop of my mind. "Wouldn't they make an exception then?"

"No, doubtless the daughters would snap her waist and go a round for inheritance. And how could any hazard inflict on a chamber-bound lady before workers?"

"Latency mutation?"

Their discussion melted into my internal monologue. I breathed out slowly and lifted my hands from the ant carcass. Looking up, I could see the gray balmung arched over us, tips eerily sterile against the dark above.

None of the ants showed signs of physical struggle between the fungal onset and death. Not one fought, despite the metallic-gray fungal protrusion pushing out through the convex where the back of its thorax met its head, lengthening until the ant could only curl into itself at

the pain, and the balmung ran it through, its tip reaching towards the sky before breaking open and spraying spores in all directions, infecting all other creatures in the vicinity. The rooted balmung then sank tendrils into the ant's fist-sized brain and sent out spores whenever it sensed other creatures nearby through the dead ant's eyes.

The thought sent me clawing at an ant carcass's eyes and compound plate with vigor. The eye caved inwards, plates falling away to reveal the white mycelia filaments webbed within. Holding my breath, I unwove the tangled glands and nerve threads, following its veins with my fingertips, inwards where it disappeared into the half-eaten, decomposed mind of the ant. I gritted my teeth and crawled in, feet scrabbling at the mandibles underneath for a foothold.

In the ant's fist-sized mind, tendrils braided into the folds of gray matter. I pried through them, drawing notes on the back of my hand with the pigment line embedded in my right pinky. The fungal infestation of the ant's mind concentrated in the hind cortex, at the root of the mandula. I measured the size of each lobe against the calibrated knife-scars in the interior of my left thumb. The subterior lobe was once engorged, and now deflated and strained, with the lines still bloated, root-like, towards the bottom.

"You," I said to the swollen gland cupped in my hand. "You control aggression and social behavior. You were suspected to control fine tactical behavior, but have been granted reprieve. But if you don't control anything special, why were you stimulated prior to death?"

My ant was far too rotted for any further analysis. My thought-stone could not pick up thoughts where there were none.

My breath whistled through the grin split on my face. I pulled, damp and happy, out of the ant and rushed for another nearby corpse, slightly fresher where the balmung was a tender stem of white above it. It took another two carcasses before I found an ant's mind that was cleanly

partitioned, where the heavy subterior bunched against the floor of its exoskeleton, propped up by mycelia.

I followed the gland upwards, when someone rammed into my legs and I was thrown backwards out of the ant head. I wiped damp hair out of my face and snarled, “Albatross! Spit! You’re dead!”

The boy with the skull necklace spat sideways into the dirt. Ueshar, Saresen called him. “What’s wrong with everyone?” Ueshar hissed. “Balmung is an allergen at best and effective at worse! Why’s everyone just sitting around?”

When I only stared at the boy blankly, he gave a sharp growl of frustration and rushed towards Moray and Hansil behind me, who were engrossed in discussion of ant social trapping and its application to the arrangement of the carcasses around us.

Above us, the hard blades of the balmung were split open at the tips, with pale white tongues of fruiting bodies pushing through scleros. The scholars around me were entrenched in ant, stained up to their elbows in bile and dotted white with spores. While they spoke and acted as they normally did, the looming, slowly opening fungi overhead seemed a stark contrast to their bright enthusiasm. Mon’s boisterous voice cut through the steady sun-stone torches. His head nearly touched Saresen’s, bent over an extracted subterior lobe. Saresen’s expert fingers measured the distention of the bottom. Briefly, I was mesmerized by the movement of her hands and the possible knowledge she could uncover with them. They beckoned to me with excited grins. As I stepped closer, however, I caught sight of Boivi-al leaning against the side of the tunnel with that amused curve still clinging to the corner of her lips.

Well, spit. Shakily, I pushed through the others to the tunnel entrance where Boivi-al stood. She watched my approach with a wry smile which bunched up her leathery skin. “Interesting,” she said, “that scholar’s lust doesn’t hit children who haven’t reached sexual

maturity in the same way. Must be why Ueshar and the princess are less affected. That, and the princess seems remarkably unaffected by the loss of her coin.”

“Did you really find your coin here?” I asked. “Or did you intentionally lead us here?”

“Mine was beyond this chamber. If I can venture a guess,” Boivi-al said with an airy smile, “I believe that while no coins are here, particularly, we must still all pass through this scene before we find it. This field of carnage is the test itself. The path splits further up, beyond the lady’s carcass.”

I couldn’t find any amusement in that. “Tell me if I’m right,” I whispered. “This test takes advantage of our vulnerability to scholar’s lust without our coins. We were set up to lose our calm. There is a distinct possibility that we were not meant to solve this in time, given that,” and I pointed upwards at the fruiting bodies of balmung, hanging low and heavy overhead. “One of the purposes of this test is to determine whether we can function normally without our coins to temper the sharpest edge of our scholar’s lust.”

The bird woman took a moment to stand. The bags under her eyes were prominent, but she was the only one unsurprised by the carcasses in the widened chamber. Others scholars had always given her deference, but it wasn’t until now that I felt the weight of her presence. She shrugged and fiddled with the tails of her long gray hair. She said, “About five scholars die a year from scholar’s lust, princess, because they can’t be transported to Loa in time for memory extraction. Another two on average die from losing their coins. That’s more than the students who pass the exams, so they host the exam tournaments every decade to make up their numbers. This is a critical skill.”

“Yes, but you begin with small separations between coin and user, not this,” I growled.

Boivi-al’s eyes showed pity, and I bristled at the hand which reached towards me. She dropped her hand and shrugged. “Regardless of what our examiners have planned, the answer to

this particular balmung case can be solved in the allotted time. Spore allergies and balmung rooting can both be prevented by spending time in a sweat bath, so there's little physical danger." Boivi-al smiled out at the working scholars.

"Without our coins?" I demanded.

Boivi-al scratched her head. "I didn't need mine, but perhaps they might."

I let out the breath I was unaware I was holding and stood to my full height. "I know," I said into the vaulted cavern, loud enough that the sound echoed upwards and hissed between the corpses. "There's an explanation for this."

Which broke the aura of lust felled over the chamber. Eyes glanced up at me, puzzled, but the unnatural brightness and curiosity in them, as well as the engorged veins around their pupils, faded with the promise of information. A little taken aback by the immediacy of their reactions, I flushed and blinked as more than a dozen sun-stones shone into my face. I was overwhelmed by grinning faces and the expectation on their tongues. The boy Ueshar turned towards me almost too quickly, with a face filled with uncertainty. I estimated he was perhaps of a similar developmental age as I, though I had lived far longer.

"But..." I envied Boivi-al her reputation, Mon his friendly connections, and Saresen her gravity. "That's the trap of this test. We will need our coins to think logically and find the answer. Isn't that just common sense?"

Slowly, sounds of arguments began to rupture around me. I watched the others shake off the heat in their minds, but then met the gaze of the bird woman by the door, who smiled and gave a customary shrug and, to my surprise, supported me. "We're a fine rabble of headless roaches," Boivi-al said. "There's a reason all dullahans search for their heads first."

And so with Boivi-al's encouragement, we herded everyone as best we could away from the ants and past the colony lady into the tunnels beyond. Some, like Mon, could not be

convinced to leave the ants, but with difficulty, eyes still bloodshot and breathing like a dog in heavy heat, Saresen tore them away from the corpses with her words. Those few stumbled in the dark, sun-stones unstable and footsteps eerily loud.

“Isn’t this a strange way of testing dowsing?” Tenma asked. His voice still shook. “We’re not looking for anything at all.”

“No, it’s perfect,” I said, equally shaken. I wanted to know how balmung killed the ants. I wanted to know. “It’s called reverse dowsing, and it’ll give an accurate measure of how closely your mind is linked to your coin in terms of geographical distance and bond strength, and how well you’re able to meditate and sense it. It tests dowsing techniques and the states of our bonds and not any knowledge our coins may or may not have. My teacher used to keep my coin on her so I might practice.”

The silence afterwards was so sudden I knew it was something I said.

“Your teacher took your coin away? Consistently?” Saresen asked. I almost hugged her in relief because she no longer sounded angry. Instead, she sounded horrified. Which was, admittedly, not much better.

“Not very far, and she was right that it improved my bond a great deal,” I said.

Despite my wariness, I still screamed when a great shape flung dirt off its back and lunged for me in the narrow tunnel. My pistol rang twice in the cavern. They steamed off the pair of palps the creature held before its head. Those palps mimicked the erratic gestures of antennas. The creature recoiled for a moment and then, perhaps deciding it was angry, charged again. A large jagged tarsus rammed into my belly, cutting through my shirt and breaking skin. I threw myself backwards into the other students so I would not be pinned and shot again. A pair of bodies jostled me out of the way. The breath was knocked from my chest and I sprawled onto

hands and knees in the cavern. Sun-stones clattered to the ground. Behind me, the other students screamed as well.

When I looked up, I could see Impulse's face atop the creature's, lit by the sun-stone on the floor beneath it. The light cast shadows of long spider limbs and corpses onto the tunnel ceiling.

Impulse had her claws deep in the spider's face and the sharpened heels of her boots in its back, pulling back so the spider arched and twisted. Quip revealed the crescent of his carving knife, and elbowed it deep into the spider's maw, pulling upwards so the blade narrowly missed Impulse's hands and broke through the creature's carapace between its eyes.

Heart pounding, I scrambled to my feet. The spider was only slightly larger than the ants around us, and shaped with the same thin waist and muscular head. Between the splatter of fungi-infested corpses, I could only tell its species because of the light shining through its multiple legs.

"Spit on no seriously injuries! Rabble of liars." I spat a mouthful of bloody saliva to the ground. Quip wiped his blade on the still-thrashing spider. "Come on, Kaya, no one got hurt." He looked at the wounds burnt into the spider's palps and arched an eyebrow. "Good shots, those."

Saresen murmured something under her breath and stepped up to the spider. "We should put it out," she said sadly. "It won't survive long except to suffer. But I... the Cae word for 'death' mercifully doesn't exist."

Boivi-al brushed past us, and slipped her hand between the spider's clenching palps, into the dark wound split up its face. She yanked on something within the spider's head, and the creature went still. No one commented as she wiped her arm and fingers with a cloth and stalked back towards the forked tunnels.

"There's one!" Tolly shouted, voice pounding like a fire in the confined space. We batted aside the dirt and looked at the small silver piece, with the Albatross engraved on one side.

“Nobody felt anything?” We turned the coin over and were faced with a familiar bust. “That’s Vem,” Saresen said. I did not recognize the name. “Should we take it back to her?”

“No,” Moray said. “There’s still a chance the others will realize the trick to this test, and we should leave this here for them to find themselves.” And so we left the coin against the rock in the dark.

We’d wandered the looping tunnels for almost a flap before Hansil gave a shout of triumph. “I sense it! It’s close. Wait up, everyone!” And we found his coin tangled in the roots of a small alcove to the left.

And from there, the test sped up. Within the next ten blinks, we ran, as enthusiastically as we could with the low ceiling and the soft earth underfoot, from one coin to another, and the tunnels echoed with sounds of relief and excitement.

The sensation of my coin within my reach was a sharp, cold release, as if I’d widened my eyes and clean air touched the film of my eyes. I pawed in the dim tunnels at the walls, blunt fingernails catching against the edge of silver. An exhale stumbled like a drunk from my lungs. Rubbing dirt from the finely-cast silver, I stroked my bottom lip with the coin edge.

With our coins and the air in our minds, the deaths of the ants suddenly seemed insignificant. After another glance at the dead spider between the tunnels and thinking again of the functions of the subterior lobe, I was unsure why we’d wondered in the first place. Accounts of the symbiosis between spiders and behavior-altering fungi have been extensively documented, and the presence of an external predator would always be taken as a higher priority than quarantine. “Yes,” Boivi-al said, watching our faces and laughing again, “the solution was relatively straight forward.”

We returned to the surface, and subsequently to the pentagon dormitories. We met two other scholar students on our way back, and directed them to the caves. We were as tired and

satisfied as they were disgruntled and desperate. Back in the dormitories, we gathered in the mess and ordered mugs of coffee and milk, taking them in the enclosed steam room off to the side. Only Tenma and I took tea instead, a testament of our common Kiin origin, and we shared a giddy grin over our steaming cups. Perhaps it was the sharing of information, or perhaps it was merely the many flaps spent in the dank underground, expecting another spider around each corner and screams of each other being ripped apart, but I felt closer to this smaller group.

None of the other students returned to dinner. Lao did not come back, and neither did Karris or Sienna. Two of our supervisors could not be found. Rigma gave us clipped, formal congratulations before vanishing as well. Exhausted by the ordeal, we ate instead of speculating.

I was the fifth to find my coin, but I did not know how the scholars would score the trial, or even if I would be graded fairly given my circumstances.

Saresen noticed my gloom over her plate of chilled, sweet vinegar-dressed noodles. No longer angry, she jabbed a forkful of sea crests in basil and tomato oil at me. "Stop frowning or you'll sour your food," she commanded. "You definitely got above nine-fifty. You may not have intended it that way, but think about it. Because of what you did, most of us who passed were the ones willing to work together. The ones who came back as planned, and the ones who didn't pursue personal gain by rushing off first."

As we dressed for sleep later that night, Mon climbed onto my bunk and sat on my pillow. When I glanced at him, puzzled, he said, "I don't think all of us would have passed but for you. So don't have nightmares tonight."

"Why would I have nightmares?"

"I don't know. Where do the rays go? Look, I didn't present my best today," Mon said. "I've never been sick in my life. And I just... didn't handle it well. But I'm a scholar student too, and Hali abilities are all about this," he gestured to his forehead, "and this," he mimicked

sleeping. “So I can feel when the memories rise too high. I respect that you don’t want to give me your story, but I’d still like to hear if you need to talk-cure it. I can promise I won’t exploit a word of it.”

I shook open my sheets in his face. When the fabric settled and his expression remained the same, I smiled at him. “Thanks, Mon, you’re great. Even without me, you and Saresen, at least, would have passed today. But you’re wrong. I never dream about my parents. You know most scholars don’t dream at all after their surgeries.”

He leaned forward to study my face before he said, “Alright.”

All sixteen of us scholar students slept cradled around our coins that night as it rained again. In my dream I smelled smoke.

Excerpted from: *The Beginnings and the Whereabouts of All Things* by Milam si Sorenti

...Halishe

Halishe is the name given to a form of mental communication developed from the Hali discipline and ability to enter and manipulate the third and deepest manifestation of dreams. It is the primary form of communication for those residing in Hal after the Hali reopened trade and tourism to their kingship in the year thirteen-seventeen. (fd. 1495, Bickley) Halishe is built on Madisel's concept of "root language", and contains thirty-four-seventy-four foundational signals, and twelve thousand modifiers. (ct. 1743, Madisel) The Hali use their information matrix to maintain a state of high secrecy concerning issues such as the Jhesin contract, their seven hundred thousand standing army, and the Birian stateship. (fd. Erig, Yue, Fereignl, 1583, 1522, 1664)

Like Cae, Halishe is ultimately not a language which can be learned, but must be initiated into at the expense of loss of self-autonomy. It can be described as a complex matrix of consciousness coded by seven to eight hundred Hali with intellects between the range of 550 to 600 S.M.R. (fd. Bickley, 1599) Newborn Hali are measured for tenbhito activity, and subsequently integrated into the matrix. Those deemed intellectually inferior are psychologically subjugated, and function as fingers do on a hand, or ants in a colony.

One of the consequences of the Halishe matrix is the occurrences of unchildren who, for a variety of reasons, are not registered into the collective consciousness. These unchildren do not register as existing entities in the minds of their society, and mature entirely without acknowledgment or care. Most die prior to their tenth year, and those who live form individual pocket populations, sustaining themselves on theft and their own company. (fd. Saresen, 2059)

The Nature of Companionship

Year 2069, Ogum 29

We were given ten days of rest before the next test. Most remained unscathed by the events within the tunnels. Miguel and Patral, perhaps being Asieli, broke into a high fevers, with fungal growths rising out of the back of their necks. They spent the time bedridden and soaking in the steam rooms in the evenings. Fish people were notorious for aesthetics and delicacy, and the snickers of “tropical aquariums” whenever they passed by became prevalent. Tenma and I were slightly more fortunate, with only rashes on our backs and necks resulting from the inhalation of spores. These were quickly cured by the jya grass paste the canteen supplied.

The second component of the examinations was a physical affair, though I doubted it could be more physically inclined than our last. Meanwhile, though, we were free to relax on the pentagon premise and visit the small spring a short hike up the jutting sail of Albatross Landing behind the dormitories.

“After the exams and when we’re allowed to leave the pentagon’s vicinities, we’ll go see the dragonfly pools,” Saresen panted as we climbed. Her hair was bound in a tail down her neck, and she wore a short summer dress that exposed the loose end of her longcloth. Her steps were labored. “Mon and I are saving up to buy a nymph each. You should join in, though they’re priced like the sky. There’re more than thirty species of dragonflies large enough to ride, and more than five hundred breeds. I want a velcret. It’s the same red as your motorcycle with black eyes and really thin wings that could practically cut through a person.”

“Attractive.” I made a face.

Mon watched Saresen’s pack, which was three times the size of mine and twice his.

“What do you have in there? Your own small kingship?”

“Books,” Saresen stomped. “We’re working on our story by the spring. It should inspire us.”

Mon threw up his hands. “Why? Why are you doing this to us? We have twenty days after all the exams finish!”

“Monci,” Saresen said, which referred to a large blue fish only Asieli had a word for, which would not flee before predators, which was so slow it would eat its own tail and take two flaps to notice the pain, “No we don’t. Kaya doesn’t have a supervisor for the story chase, and Dan Amona said they have to know before then. That means we have to finish in the five days before the story chase, making our time remaining a grand total of twenty-odd days. If you think we can finish a nine-thirty-seven-o-five story in that time by slacking, then you can complain after you pull your weight.”

That Saresen knew my schedule better than I, and that Mon, who complained nearly as often as he spoke, worked four flaps straight through lunch, made me hope that even if I did not pass, they would. We wrote our notes and stories by the spring, and waved at the other scholars who stopped by to eat or play card games. I’d brought the half tactem set I won from Saresen, aching to pull it out, but I refrained.

I grew quickly tired of writing the name Goregol Sulli. And of complimenting the transparent sheen of the glacefish’s elongate form. I thought perhaps I overused the premise of a theoretically unbiased subject. Whenever I wrote stories for my teacher, they were entirely in my own voice and never shied away from my own prejudices. The story Mon and Saresen wanted was disambiguated from personal experience, from the perspective of a nondescript, nameless, and supposedly objective scholar. The change disturbed me, but I supposed I needed to compromise in collaboration.

During a water break, Mon asked, “Did either of you hear of the negotiations between Kiin and Moland?”

“Did you hear about that corpse they found near the pentagon?” Saresen countered. “They bundled it away before any of the students could see, and they’ve been reticent with information. Rumor is, though, it’s one of the students who failed the first exam. I hope it’s Tasaen. I hated her. Or Lao.”

“No, serious,” Mon said. When I shook my head and Saresen shrugged, he frowned and continued, “They were rewriting fishery rights to the Gut because of, you know, the spice mine discoveries. It didn’t go well. The one in charge of negotiations was that River General of Kiin, Lo. They say he’s green as spring, a prodigy, but barely out of the cradle.”

“Mon,” I interrupted. “That could mean anything in Kiin, that he was twenty to fifty.”

Mon waved off my comment. “So they said he was far too demanding, and imminent conflict might break out between the two kingships. Everything I hear about this general kid though, makes my hair stand. At Ram Tooth, he led a small armada and defeated a rogue band of Sebs, against a *Blooded*, while he was outnumbered and barely a footsoldier, think on that.”

“Well of course Kiin would win if they started a war,” Saresen said, “but they would never start one without a legitimate reason. They have too many ties in the interkingship field. Besides, they do have a strange form of honor.”

“That’s a pretty lie,” I scoffed. “Kiin nobility have tradition, not honor. They’ll find any way they can to justify their actions, and find loopholes around their rules. That’s nothing like honor. I agree they won’t go to war though. There’s too much domestic unrest with these last three emperors and empresses. Kiin hasn’t started an outright war in a thousand years, not counting the Minnowing.”

“But Kiin always keep their promises, and you can’t convince me otherwise.” Saresen sounded slightly distressed, and the sound of her pencil on paper grew louder and more distinct. “You sometimes use vouchers and words as payment instead of currency.”

“Promises are an entirely different matter,” I said. “Promises shape a society, a child, and a life. At least, that’s what Kiin believe.”

Saresen shook her head. “I can’t say I know the difference.”

“Anyway,” Mon interrupted loudly. “The River General’s a boy by the name of Lo An-tar. Kaya knows him, don’t you?”

My pencil paused for a moment too long. Before Mon, I hadn’t heard the name in anything but my own mind in years. Lo An-tar was a tall boy with large hands, a voice deeper than his age, the darkest eyebrows I’d ever seen and attractive fish-shaped eyes. He often climbed the roofs of the palace, always perched on a table or podium or tree. He liked rain, and candied squid hearts. He usually wore a necklace of ash, did not laugh at crude or cruel jokes, and had rough hands like the servants, which once made me squeamish as a child. He carried a cotton handkerchief instead of the silk ones the eunuchs and other children wore. *Look down. You deserve to know.*

“He’s a Lo, Mon,” I shrugged. “Every Kiin knows of him. Since he was pushed from his mother, everyone from an ashline with any foothold has met him, licked between his toes, and offered to bear him children.”

Mon raised an eyebrow. “That’s an image. Then what do you think of this whole situation? Think he’s someone who would throw a negotiation?”

“Mon, last time I saw Lo An-tar, he was seven,” I said exasperatedly. “You can’t expect me to have insight into Kiin issues. It’s been twenty years and I’ve never had an aptitude for

politics. I've no clue about Kiin, and I really don't much care to know. As far as I see it, it's good riddance. Kiin's a boring kingship."

Mon would've said something more, but a shrill scream interrupted him. It was a man's voice, and not one that I recognized. Saresen and Mon responded to the sound by standing, passing a pale glance between them, and each giving me an unsubtle forced smile. The scream splintered down the middle before reaching new volumes. Above us, the lanternflies darted away into the gray clouds and mist. Nightyacs, out-screamed, fluttered away. Saresen stood with her panicked face flushed dark.

I dropped my pencil and half-stood as Saresen rotated twice on the spot, brow furrowed. Finally, she reached a hand into the pocket of the vest she wore over her sundress and clenched it into a fist. The scream was muffled, and after a moment stopped altogether.

"What was that?" I asked.

Saresen smoothed out the fabric of her sundress. "Chronic illness, nothing really to worry about," she said. "Anyways, Kaya, what's your S.M.R.?"

I raised an eyebrow at the abrupt and obvious shift in subject, but decided if Saresen and Mon did not ask of the downfall of my ashline or my teacher, I would show them the same courtesy. Still, my throat burned with curiosity. There was a small metallic edge to the screaming voice that I recognized. It was a scholar's coin screaming, but Saresen was neither in pain nor threatened. The alternative was even stranger. Why would Saresen carry another scholar's coin, especially if separation rather permanently destroyed the mind?

Finally, I said, "I'm not sure it'd tell you much, but I scored five-forty-two. What'd you want it for?"

"Just curious," Saresen said, at the same time that Mon gave a surprised huffed. When I shot him an annoyed glare, he widened his eyes at me. "You act like such a princess in tactem,

saying you're from such a high ashline, I thought it'd be higher. You wouldn't even be qualified to keep your brain in Hal. You'd be absorbed into the collective just as soon as you could say please. You're barely high enough to be a scholar!"

"There's no S.M.R. requirement for scholarship," Saresen said. "Besides, Kiin S.M.R. results have an average of twenty points of mercy on either side. Not the most reliable."

I shrugged. "What's yours then, Mon?"

Mon gave me a light scuff on the neck. "Wouldn't know," he said. "I never tested. The whole S.M.R. measurement is stupid as a... as something really stupid."

"Stupid as a monci," Saresen supplied. "And you're a hypocrite. You can't claim to not care and then call someone else out."

"You're a traitor with no wit to speak of," Mon informed her primly.

"I agree with Mon," I said. "The exam results strongly affect how you are viewed by the whole Thumbprint outside Loa, but they are so easily manipulated to give you the results you want. They are not universally reliable across all cultures, though they claim to be."

"You can't manipulate the S.M.R. tests!" Saresen exclaimed. "They're taken at that fringe age when an infant's cognitive and logick centers have just developed. I mean, if we took it now, the matter would be different, but how do you cheat swaddled in cloth and diaper?"

"Yes, but you realize that unlike other subspecies, that age is around five or six years for Kiin children because of our longevity," I said. "Our brains develop slower, but unlike a single-cycle infant, we could already speak, communicate, ask questions, and even climb trees and rooftops to spy on others taking the exam. It's not difficult to cheat."

"Wait, wait," Mon interrupted. "If you cheated, why is your value so low?"

"Trims, Mon," I said patiently. "Nobody talks about it, but it's a common practice to train for your S.M.R. test and keep a low score. That's probably the cause of the large mercy margin."

And I know for a fact every Kiin child from prominent ashlines cheats. This is all in case the Emperor decides to trim prodigies. As children we don't understand that, so they pose it as a game, and it's a point of pride to hit that middle mark."

"You? Is that why Pen Emperor trimmed your House?" Saresen demanded, looking vaguely horrified, caught between anger and a certain degree of fascination. It was a typical scholar expression.

"Not from the S.M.R., but well..." I breathed past a rising gravity in my chest.

"But prodigies are abundant in Kiin, because you infuse children with the ashes of ancestors," Saresen frowned. "Why would you continue the tradition under threats of death and annihilation?"

"Just because a tree is trimmed, doesn't mean it stops growing," I explained patiently. "Ninety-nine-part-hundreds, ashes give a newborn past memories and intelligence, make them successful and prudent and wise. They don't usually make prodigies. And even if you were a prodigy, so long as you don't stand out, there is little danger."

And of course, Mon asked, "So what about Lo An-tar then?"

Year 2069, Ogum 32

I found Lisarel Amona seated in the canteen long after all other students had slept. I'd woken from static in the walls and tiptoed out of the dormitories for water. Amona's face was in her elbows, red hair sprawled across the table. The pentagon was colder at night, though the skies were clear then. The spice stains and food wrappers from the students the previous night had been cleaned, and I felt a momentary pang of guilt at our living habits. I suspected that not all of us were unhygienic in our personal lives, but something about the social mentality of living with a group of youngsters might've encouraged messes.

I poured water, and spice, and sat at the table across the room from Amona. She did not stir as I finished the drink in silence.

On my way back to my room, I asked, “Dan Amona, is it true one of the students died during the first exam? Who is it?”

Amona grunted. “What do you believe?”

“Rumor is,” I said, “that Sienne Rores died. This is further substantiated by the fact that her name was not on the roster of the departing ship that day, the fact that when Miguel visited the infirmary that night, it was closed, and Mon said he saw a blanketed figure led away from the pentagon in his dreams.”

“It that were the case, it would be a tragedy,” Amona said, and I could sense the finality in her tone.

“What if neither Ueshar nor I had been in that tunnel with the ant corpses?” I asked. “Were you relying on someone randomly breaking free of scholar’s lust? On Boivi-al? The entire room would’ve failed.” I shook my head. “That doesn’t seem fair. How can you infect us with scholar’s lust, take away our only defense against it, and then expect us to defeat it? Boivi-al’s right. She didn’t interfere, so it was only because Ueshar and I had not reached sexual maturity that we didn’t succumb as completely.”

Amona gave a chuckle with her face still buried in her arms. “I was not in charge of that exam. Do you know the only three subspecies technically suited to scholarship, Rim?”

I shook my head. Amona, without looking up, held three fingers to me. “Hali unchildren, Cici, and the people of Winter’s Island. They have the highest S.M.R. values, they’re hardy, culturally open-minded, and very, very strong. But we open this exam to Molas who only live forty years, to Sebs who are ruled by their guts, to Asieli with tremendously weak physical

dispositions, to Tomkols with their remarkably slow mental processes, and to Kiin like you, raised in a culture which condemns the ideals of scholarship. Why do you think that is?"

"To be fair," I said.

"No, to be practical," Amona said. "Scholarship is not generally a solitary enterprise, though many manage it admirably. All scholars know that the more variety of abilities and minds gather, the faster a solution, sometimes the only solution, can be found. Growing up in Loa, or with licensed teachers, all scholar students would have been taught to protect their own, to protect those who can be considered weak. In this case, Ueshar or you. Haven't you wondered why Don Jhermeg and Dan Saresen flock around you?"

"Are you saying this is some sort of duty for them?" I demanded. "You're wrong. We're friends and that's not about practicality or logistics." Perhaps at first, Mon approached me because he wanted intimate knowledge of the Kiin, but that was no longer the case.

"I'm saying that sometimes," Amona looked up then, eyes tired and mouth sour, "to succeed at scholarship, as well as other endeavors in life, you will need an ensemble rather than a solo performance. That's something Sorenti the lone-bird could never teach you, I'll wager."

And damn Lisarel Amona, she wagered right.

Year 2069, Ogum 34

I did not understand the nature of friendship.

I did not understand why the high-strung and annoyingly moral Saresen flocked with the often belligerent Mon, why dry, practical Boivi-al preferred to hermit, or why Ueshar tailed me with glares and childish questions bordering on inappropriate for a scholar student. Particularly, I did not understand why Quip roomed with Impulse and was never without her company when the two showed each other so little regard. They neither spoke nor looked at each other that I knew of.

Quip's hand never strayed from his weapon and Impulse's thumb seemed perpetually locked in insult.

There was a night between exams when I walked through a row of then-empty dorm rooms and saw the depth of their contradiction.

Saresen, Mon, and I worked late that night, writing the webs and corners of our story. Because I was the better writer, I took three corners and the others each took one. We opened with a story of glacefish on a fifteen notch night, and then stretched and molded to a physical and physiological overview. Mon's calculations followed, with a conclusion that glacefish would be inbalanced in sixty-three years and inevitably extinct in a hundred and five. In tangent, we speculated that the glacefish were exempt from Sulli's principle on the basis of its pre-neogenia ecology, and so glacefish cannot benefit from the biological feedback demonstrated by many species. Saresen wrote an account of how Molas historically interacted with glacefish, hunted them as pests, and once moved cities to avoid the swarms hatched from stasis. A simple enough story, Saresen said in the conclusion, but functional. Just as a Molas without glacefish is perhaps a safer kingship, but it would lose a luminary.

At the summit of our story, we no longer needed the thick volumes of Molas history or lamprey dissections and physiology. I returned three story references to the domed central room, climbed two flights of stairs to the tall southern balcony, slotted two thick volumes carefully into their places and wiped at the invisible dust gathered there in the books' absences. The third, the history reference, I placed in a plastic bin by the door because Patral needed it as well.

Mon and Saresen waited for me to play a fast and wager-less game of tactem in the bunks, and I walked a shortcut through the north side of the pentagon. Technically, the south side passed through the canteen and was closer based on distance, but the north was devoid of other students, so I would not have to stop and socialize.

Crossing the third room out of the reference hall, where Sienne and her bunkmate used to room, I heard a muffled grunt. At first I attributed the noise to a night tryst and ducked my head, prepared to politely wander in the opposite direction. My coin pulsed against my throat, and I realized none of the bunk doors were closed, and I'd seen all the remaining scholar students in the dorm rooms and the canteen, save two. When the unfamiliar cry sounded again, echoing and hoarse against the vaulted ceiling, I decided stories were worth more than manners.

I shivered in the sound of rain from outside, toed the third door open, and blinked a moment to adjust my eyes. The scent of gunpowder and metal assaulted my face.

Quip and Impulse tumbled on the floor between the two set of bunk beds. One of the lockers was uprooted and collapsed heavily against the bed frame, a gaping hole in the metal. A bed frame pillar was splintered a third of the way up. The insect-wing windows behind them were torn, veins curling inwards and dripping water.

Quip's left shoulder and elbow were popped out of their sockets and an open gash streaked up his face, narrowly avoiding his eyes. Impulse was far worse off, the shape of her bare chest caved inwards, and the jagged ends of broken ribs sharp against her skin, pushing bruises across her chest from within. Quip's carving knife was bedded in the woman's right thigh and there was a smoking hole in her shoulder. Both their faces were warped by fury and bloodlust. Quip's taller but thinner form was arched over Impulse's, his thin lips pulled back to expose canines the length of my small finger.

"Stop it! Stop!" I shouted. I didn't know when I'd drawn my pistol, except that sometime between observation and comprehension, the shaky tip of my firearm pointed in their direction. The notch at its tip framed Quip's torso.

The two Sebs stared up at me for a moment, blood fading from the veins around their eyes. Slowly, Impulse stabbed her heel, with the wicked hook at its ankle, into Quip's stomach and

forced him off her. Quip half-deflected with his injured elbow, making no noise as the hook cut through his longcloths. Impulse cradled her ribs and climbed to her feet.

“You need a medicist,” I said tersely. They both did, but Impulse most of all. I wondered what Saresen would say about this scene, since she was of the opinion that I started fights and had an aggressive nature.

Impulse extended her tongue, presenting a fragment of white tooth on the end, and allowed the piece to fall to the floor. She gave Quip that obscene gesture with her thumb and her tongue, and backed to a safer distance. She limped a little, but made no sound except the steady ping of blood against the floor. “I’m watching him,” I said. “Go.”

Impulse watched my pistol closely as she stumbled for the door, but I kept the tip on Quip.

As she passed, I heard a raspy, “grateful,” before she lurched down the hall.

“You were trying to kill her,” I said. I backed well out of the room and ducked around the corner, leaving only my pistol and eyes on Quip as he stood.

Quip shrugged his good shoulder and winced. “Mutual.”

“Well, you were trying harder,” I accused. “Spitting bird, Quip! I can’t believe I roomed with you. Did you feel like slitting my throat in the night too?”

Quip gripped his upper arm with his good hand and pushed until his claws left marks in his skin. The shoulder slid into position with a grotesque popping sound. I cringed and lowered my pistol.

Perhaps bunking with Quip had punctured holes in my precaution, because the Seb took that moment to lunge at me. I raised the pistol and shot a burst of qi, which sizzled harmlessly against the broken arm he held out before him. He knocked me to the ground with his shoulder in my chest and gripped my pistol as I fell.

As I lost my hold on the pistol, my other hand went to the harmonica. My hand contracted hot skin.

I stared up the nozzle of my weapon, breath ragged and chest throbbing from the pressure of my terror. Warm blood, from Quip's previous wounds, dripped down the harmonica to my fingers. He'd grabbed my harmonica before me, and my hand closed on top of his.

For a moment, Quip's open mouth displayed hunger, before he pinched his lips shut. He took a long calming breath.

"Quip..." I asked softly, staring at the hand on my teacher's darkest secret. "Do you, by any chance, know what this harmonica is?"

"It is a weapon, is it not, Kaya? You reached for it." Quip's normally soothing and mellow voice was deeper and rougher through the bruise forming on his throat. He stared down at me, and I could not sense emotion in his reptilian eyes. Finally, he released the harmonica. He disengaged my pistol's main chamber and offered the weapon to me, hilt-first. I took a moment to stand and command the tremors to leave my limbs before taking the offered weapon in both hands. "You really shouldn't interfere, Kaya. Even with qi, you're not a match for me."

Before science taught us qi was a cellular excretion, the Kiin believed we were beloved by that which we called life, or creation. Qi was the outward expression of our superior position on the hierarchy of subspecies, allowing us to grow tall and age slowly, create life and even gods. Load of spit.

"I thought we were friends," I said stiffly. I swung the harmonica several times to shed the blood gathered in the crevices. "Are you a feral Seb?"

"Friends are dangerous things," Quip said, gesturing for me to move ahead with his good hand. I fidgeted at the thought of a Seb behind me, but I didn't dare refuse or reattach the

chamber of my pistol, though the disassembled metal was awkward and uncomfortable in my palm.

I must've glanced behind me a hundred times in the short walk past the empty dorm rooms and canteen to where my friends waited.

Quip remained three hands behind me, far too close for me to breathe easily. The quiet crack of his elbow sliding into proper orientation made me stumble sideways into the wall, pistol chamber sliding into place and the weapon pointed at the Seb. Quip glanced from the firearm to my face, supporting his elbow and shoulders with his good arm. He sighed and gestured me forward again.

Saresen was at the door, hands clutched tightly to the knob. She gave me a hateful glare. "You can't send a half-dead Seb past us and then not let us know you're safe. Albatross gizzards! I'll throttle you alive one of these days."

I smiled shakily, feeling better despite Quip still at my back. "I'm fine. I wasn't involved in the fight."

"Of course we knew that!" Saresen huffed. "You couldn't do that to a Seb if she was bound to a pole and unconscious." She cast a wary glance behind me at Quip, who stood to his full height a little shorter than I, and the gash on his face was prominent against his shaved scalp. "If you would like, Quip, I'll accompany you to the medicist."

"Thank you, Saresen, but I won't be visiting the medicist." Quip wiped a thin tail of blood from his eyes and licked the blood off his index finger.

"And I'm sure it will be counterproductive to kill me," I said to Saresen. "At least until we've finished the research story. I'm the best pen between the three of us."

Mon emerged from the room then. "I told you not to worry, Saresen. Hello Quip, would you like to join us for a game of tactem?"

“Mon!” Saresen and I hissed in unison.

“Thank you, Mon, but I think I will go beg a length of bloody snake from the canteen and retire,” Quip said politely. He gave a vague gesture to his injured arm and the open wound on his face. “Though perhaps I will find an empty room to serve as refuge from my bunk mate tonight.” I rather thought Impulse needed a safe haven from Quip instead, considering the result of their earlier skirmish.

“That’s a pity. I wanted to ask. Have you heard about Kiin and Moland and Lo An-tar?”

Mon asked Quip.

Quip answered with a laugh and another question. “Why, Mon, have you heard about the Sebs uniting under Blooded Supremacy? They plan to take over the world some day.”

Excerpted from: *The Beginnings and the Whereabouts of All Things* by Milam si Sorenti

...*Cantabile*

While the power of sound and music over matter and world physics is well documented, nowhere is this demonstrated as concretely, and without the mysticism surrounding Cae, as in Asieli cantabiles. Cantabile refers specifically to the first movement of a freeform aria, but has been adapted as a term to describe Asieli freeform chorals. (dc. 1874, Guilliard) Perhaps due to their close interaction with ocean, Asieli cantabiles have the particular effect of forming a counterpoint to the sound of waves, and then influencing their kinetics, temperature, and buoyancy. (fd. 1604, Rhannian) Other expositions and even dissonances from Asieli lips also affect the ocean, but the effect of the cantabile is known to calm storms and render the ocean as hospitable as a live-inn swim pit. (fd. 1621, Rhannian)

Drop

Year 2069, Ogum 37

On the morning of the tenth day, at precisely the third flap, Amona strolled into our dormitory rooms and instead of waking us and condemning our slow day, she wrote ‘Fourth; Dalton’s Twelfth’ on our bulletin in florescent blue ink. Mon, who was awake and reading Daracles in his bunk and threading strands of his wheat-colored hair between notable pages, was the only student to see her. By the time I woke, a crowd had gathered before the bulletin. Saresen waved at me from between Ueshar and someone I did not recognize. “Albatross, Kaya, you must be the only human to suffer from carnivoran lethargy.”

I waved my hand in a chopping motion. “There’s no such thing. Disproven twenty-three years ago. Jump ahead a few decades, Saresen. What’s everyone looking at?”

Saresen grabbed my elbow and ushered me back into the room and said, “If you want to bathe, we should go now before the hot water runs low. Hurry, grab your wash bag. The exam starts at fourth.”

I yawned. “We’ve nearly a flap. That’s... more than enough time.”

“Well I want to soak for at least half that,” Saresen said, yanking open her locker for the thick sponge pelt hung on a hook inside. A salt pack was placed at the bottom, between porous netting, to soak up excess moisture. Saresen used minerals in her washes, rubbing them across her thighs to clear away the grime which too easily collected against her half-Cae skin. “Hurry up!”

I laughed. “And they call me a princess! I have to eat and I don’t mind cold like you do, so you go ahead. Chlorine and heat is a terrible combination for me. Where’s Mon?”

“He’s running,” Saresen said, “in circles around the pentagon like a headless ostrich. Suspect he needs to work off nerves, since he doesn’t think he performed well on that first test.”

Forget him. Mon will be fine left alone. We might have heavy physicals waiting, so I'd warm my tendons and do some stretches first, if I were you."

Where were Quip and Impulse, and were they killing each other again? I wondered.

"How physical is a physical exam?" I asked. "I thought the dowsing exam was physical enough."

"Scholars are sadists," Saresen agreed.

I ate slowly and carefully. Because Mon was not there to stir up cicada eggs and fluffed pancakes, I mixed a simple congee with thick wheat and half a handful of nuts, the staff's battered potato with an unknown egg mass, half a glass of bat milk with a half-pack of spice from my stolen stash. After the quick meal, I found Saresen lounged in the full wash, slowly rotating her thin shoulders in the warm water. The both of us spent half a flap in the dormitory wash, swathed in sponge and heat, stretching our calves and backs. I brought a book to pass time: a Kilkrott horror about an ancient being from the phantom continent abducting unsuspecting children. Saresen scoffed at my choice in light reading and dunked it under water. I put my wet towel on her clean clothes in retaliation.

Eventually, we retreated to the bunks and continued light stretches. Mon returned then, smelling like a horse and drenched in sweat. His scent made the thick half-shadow beard across his jaw more noticeable. We banished him to the wash and packed for the day.

"What are you doing?" Saresen asked, when my eyes lingered on a pair of scissors. She rolled her eyes.

"Nothing," I said quickly. "Never noticed, but scissors *are* clever." Pistol, a scissor snip to my grown bangs, disinfectant and bandages in a roll, a lighter, a torch with a newly activated sun-stone, a cocoa-chocolate slab, a plasterine water container filled to half, my old boots, a thick ratide blade in a leather sheath, and the white harmonica.

“I don’t understand how you guys endure long hair,” I complained as I packed.

“My face is shaped asymmetrically,” Saresen replied. She packed far more than I did, including rope and slivers of wire, needles and thread, durable plasterine tape, and great handfuls of plastic bags. “And not in that way Seb skulls are ridged and interesting. Wasn’t born with it either. It’s from a fight I got into when I was young. Keep it to yourself, but I can hide it with long hair. Mon’s just vain.”

“That’s a lie,” Mon said. He was clean-shaven when he returned. He buckled a slim belt around his waist. Even without the grimace on his face, I could tell he was nervous from his constantly shifting and the erratic distribution of his weight. “Mine just grows too quickly. Braids are almost easier.”

“Where is Dalton Twelfth? Not on the dormitory premises?” I asked.

“And they’re more presentable in most cultures,” Mon continued. “Weather’s not great today. It’ll definitely thunder while we’re out.”

“It’s one of the satellite pieces floating beneath the city, like a very, very small floating island. The dragonflies won’t fly this close to a storm. We’ll have to climb down the chains.” Saresen said.

“Is that part of the exam?” I wondered. “Are the chains maintained enough to climb down, or do we have to risk metal poisoning. I mean, I think I kept the gel soles for my boots, but do I need them? Let me see what you’re wearing.”

All sixteen students left the pentagon in a group, splitting into pairs and threes as we walked. Our dormitory was labeled “Dalton Ninth.” The other students knew our destination and I followed like sheep. Apprehension ghosted across my arms and calves as we pushed past the dormitory gates and pulled onto the main road. Rain drummed on the red leaves overhead, which occasionally folded to tip water across our heads. The black trunks around us were sleek and

black, with water licking down between their grooves and crawling into the root systems. Lanternflies and smaller dragonflies clung to the underside of those leaves, fluttering as they folded down with water. Warm green stones were bedded into the mud, holding imprints of our shoes for barely a moment before smoothing over. I felt strangely conspicuous. The other scholars of Albatross Landing stopped to wave, and I wondered how all of them knew we were scholar students. We were not dressed particularly differently, since the majority of the city folk wore similarly practical outfits, and their ethnics were as varied as ours.

When the trees cleared, fog lingered, so thick I could sweep a hand through and see the dark outline in the moisture. We barely saw the edge of the city in time, and one after another shoved against the chain fence.

Dalton Twelve was leashed to Albatross Landing by a chain the thickness of my torso. It was not as impressive as the ones which anchored the city, but it also smelled strongly of solid metal. I wasn't an expert in metalworks, and without testing or tasting the oxides rusted on the surface, I couldn't tell the chain's composition. It looked solid enough to support our weight, but not solid enough to prevent the somersault of my gut.

Quip did not hesitate. Swinging his pack tighter across his back, he grabbed the chain link and began a steady, controlled descent. Impulse, nursing a wound which would've killed or at least crippled me, followed suit. Others did as well. Finally, I was jostled before the chain. Reassuring myself that I had not yet heard screams, I hooked my arms in the slippery chain link and dropped my weight onto my arm. I descended by kicking my feet into the links between the chains. My palms were immediately stained green-black against the cold, rough metal, and the color rubbed off against my plain yellow shirt. The crusted rust resembled a saur's ridged skin, though without the Sun-toasted dryness or the faint pulse of passing blood underneath, or a baked corpse of coral, sleek with moisture. There was some slack in the chain further below, though it

was difficult to tell from its thickness and the links rusted together. “Three,” I counted as I descended, hugging the chain close to me and keeping a safe twenty hand distance from Patral who climbed below me, “Five, six, eight...”

Rain pelted down. I could only squint and my fingers constantly slipped over the wet metal, rubbing loose crusts of oxidation. The fog was so thick that when I reached outwards and spread my fingers, I could not see my hands.

Mon plastered to the chain two links above me, dangerously close to stepping on my hands. As he descended, he continued to talk. Mostly about Lo An-tar, but also about the fog, the compositions of the chain, his speculations on the exam, and the way his braid aided him in bedding women and his dimples men. Three times, he slipped a little, and laughed at my panic.

Many of the scholars expected what would happen next, or at least claimed to later on, Mon included, but I was too distracted and annoyed with Mon’s endless chatter.

At fifty-two chain links into our descent, a shout came from overhead. I looked up in time to feel the slack in the metal. Perspiration sped, beading onto my skin. Vertigo filled my veins as we began an uncontrollable descent. The chain end whipped down, and suddenly Mon was below me. Hair matted in my face. Through those wet strands, I saw someone fall towards me, the silhouette in the gray mist growing larger until a frightened face emerged and I did not have time to dodge without letting go of the chain.

“Hold on to it!” Mon shouted from below.

“Look up!” I cried.

The student fell into me. An elbow struck me in the side of my face, and electronic noises filled my head. My grip was knocked loose as the chain swung sharply downwards. I fell with the student in my face, narrowly missing the chain as it snapped past us. Patral’s scream faded, and I caught a brief glimpse of her calf lodged between the chain links.

“Hang on!” I heard Mon scream, but hanging on must’ve been more difficult to execute than preach, as the chain’s momentum carried it through the fog and away. I heard the cries of other students as they lost their grip.

I fell for what must’ve been mere moments, with the added momentum of the student in my chest, but the pain of water breaking against my back still took me by surprise. I yelped and we plunged downwards into the dark ocean. Bubbles lashed past my face. I tried to climb upwards but the student was a panicked anchor around my neck. I couldn’t get air. Salt water entered my nostrils and I swallowed several mouthfuls gasping before I managed to hold what remained of my breath.

We sank, the student atop me was heavier than the water, and his flailing only increased our descent. Desperation came to me then, and I kicked out with both legs. My qi filled my fingers, burning the student’s skin as I struggled. Water heated and whispered around us. The other student gave great cries of bubbles, with dark scorch marks in his shirt and arms, and released me.

Instantly, I propelled myself upwards, face scrunched and chest heaving, throwing what was left in my lungs into my throat. Bile came to my nose. The water surface was so far above me I could barely see light.

A slim, serpentine form twice as long as my body slithered over my head, silhouetted against the fractured light above me. My legs slowed at the sight, but then I kicked out with renewed desperation as my body’s need for air grew. I passed upwards by the shape, and when it did not move, I dismissed it as a rift in the water or refuse. Involuntarily, I breathed in water again, and thrashed the last few hands until I broke into air.

For a moment, though I was sure I’d surfaced, I could not breathe. I drew water into my body again and the salty sting of it shattered my thoughts. Rain came down, wrapping the sea and

I together, filming over my nostrils and pulling at my hair. I spared a hand to wipe at the rivers along my face. Then, with my mouth free, I gulped down wonderful, life-giving thirty-four-part-hundredths of oxy and neoxy.

Coughing and splashing to remain upright, it took me far too long to gain my bearings amid the rise and fall of the waves. They buffeted my face and pushed from behind to dunk my head in the water. My hands immediately groped at my waist, closing on the long metallic length of my harmonica. When my eyes cleared a little, all I could see through the salt hanging heavy along my lashes was the wet fog.

Excerpted from: *The Beginnings and the Whereabouts of All Things* by Milam si Sorenti

...*Satellites*

It is known that beyond the light of the Sunbird and moon worm, there are foreign entities suspended in the skies. (fd. -39, Albatross) These entities are speculated to be made of gas, and most are several times larger than our world. They can only be observed within a short span of fifteen days in Kyrum, when the moon's light goes out and the Sun's light is hidden behind a ridge. (fd. 22, Ysendri) Scholars refer to them as satellites, and speculate of other life and other deities upon those worlds. (dc. 101, Hannah) Without the ability to bypass the Sun's heat, however, humans may never be capable of exploring the spaces outside the Thumbprint, whether they be the distant satellites or the neighboring phantom continent.

A Satellite for Scholars

Year 2069, Ogum 37

“Ah. Spit!” I ducked my head into the salt water and looked down through the sting in my eyes. The other student was nowhere to be found. Water rocked my head and with every breath, I swallowed the sea.

I dove under again. Sea salt irritated the redness on my back, which was bruised from my impact with the ocean surface. Barely a body’s length away from air, I looked down and could see only murky shades far below. Bubbles escaped my mouth and nose and migrated up my cheeks, catching against my long eyebrows and batted my hair upwards as they rose. All of my body hurt, and my limbs were sore and soft as Saresen’s cold noodles.

I couldn’t see the other student, but from the corner of my eyes, I saw a strange pale ocean snake dart away into the dark.

A firm arm took me from the elbow behind. I allowed the buoyancy of the water and the stranger’s touch to pull me upwards. “Spit!” I thrashed. “Oh spit. Oh spit!”

“Kaya!” It was Patral, whose left knee was engorged to the size of a small melon beneath the water, leg bent and stiffly held. Her face was the same color as the fog. She drifted towards me, catching my elbow with unbelievable force and lifted me upwards so my face was completely exposed in the air. The water surrounding her was utterly docile. “Calm down, Kaya! What’s this?”

“This spitting exam!” I cursed. “I killed someone! I’m a spitting...” I calmed enough to look her in the eyes. “The other student on me couldn’t swim, and we just kept sinking. Must’ve been a Tomkol. I kicked him off. He’s still under. And, and,” I paused to take a breath, clinging onto Patral as tightly as I could. “There’s something in the water with us.”

“Can you stay afloat?”

I nodded.

Patral whistled a calming note at me and dove underneath. Her pale form shot deep through the water, straight downwards, as fast as migrating swordfish. Her awkward, swollen leg drew a line of white foam.

“Wait, your leg!” I shouted. Taking a few breaths, I dove after her, but she had already disappeared from my limited underwater vision. I felt momentarily stung by my obvious incompetence, but then rationalized that Patral was Asieli, a member of the fish people, born deep enough underwater that the pressure eased her mother’s labor. Her songs could change currents and summon tidal waves. She could not breathe underwater, but it was a near enough thing.

A long blink of fog and uneasy floatation later, Patral swam up towards me, twisting her body like an eel for propulsion. She was alone.

Patral broke the surface with a sharp intake of breath, and then shook her head. “Couldn’t find him.” Her eyes were swollen and unnaturally wide, from fright and exertion and physical distress. “He’s not down there.”

“Maybe you didn’t look far enough down ...” I stammered. “Maybe you missed something...”

“Then you descend,” Patral snarled, snapping her sharp, fish teeth in my face. Her spare arm swept wide around her, forming powerful crescent-shaped ripples. When I made to speak she interrupted. “I didn’t see his body either. Now focus or I’ll drown you on the spot and eat you.”

I closed my mouth, aware of the cold of her skin and the water on her dark lips. “What about that snake? Did you see it?”

“Sh,” Patral panted, flipping onto her back in the water and clutching at her broken leg. As if obeying her voice, the ocean was a gentle, buoyant surface, bearing her weight. She

hummed, but the tune was interspersed with speech and ragged, breathless agony. “Help me with my leg. Can you see anything? My eyes work better underwater.”

I paddled over to her, awkwardly pulling her injured knee upwards. The water was gentle enough in her proximity that the slightest movement of my fingers kept me afloat. “Nothing. Kiin eyes aren’t good for much but decoration. Hold still, and keep your eyes out under us.” I took her left knee into shaking hands, gently cupping the curve of her kneecap. I breathed out deeply and shifted the kneecap beneath the skin first left, then right. The leg gave a spasm in my grip.

Patral lifted her face from the water long enough to ask, “Patellar?”

“Seems like it,” I said. “There’s nothing to hold it in this position, so we’ll have to straighten it. Bear it a little.”

Patral gave a groan and buried her face beneath the water surface again. I quickly slid the bone back into place and pinned it there with my thumb on the bone and fingers underneath her knee, easing her leg straight. I squirmed bandages from my pack and bound it tightly around her knee. I was proud to have kept balance with my knees spread wide and floundered only slightly during this action. Patral’s body clenched, her arms crossed and fingers digging into her sleeves. Slowly, so I could not tell if the moisture on her face was from agony or the sea, Patral righted herself and touched my shoulder, muttering something I could not understand under her breath.

“What?”

Patral said stiffly. “I saw the chain underwater, felled from the city proper. Everyone else will probably gather at the satellite as well. Follow me. Flutter small, so we don’t make any sound.”

“Right,” I said. “Of course you didn’t see any snakes.” But since Patral refused to speak more on the subject, and my eyes could pierce neither the gloom under the water or the woolen weather around us, I kept my silence. Even with a broken leg, Patral swam faster than I could,

skimming silently across the ocean surface like the exocet we glimpsed earlier. I followed at a far more conservative pace, digging my hands into the water and breathing to one side. The trail split by the Patral's form was soft and urgent, pulling me forwards.

The chain was not far from where we landed, but the fog obscured it. After a few blinks, I could see the dim shape of it in the gray sky, and the soft shadow cast by Dalton Twelfth. I heard another voice hum the same aria Patral did. Several shouts heralded us, and I breathed a sigh of relief when I saw that Mon and Saresen, as well as several of the other scholars were already there, cradled in the water.

"Kaya!" Mon shouted. Ahead, Patral was greeted by her bunk mate. Mon paddled over to grab at my face, inspecting it with concerned eyes. His jerky water-treading shook my jaw. "That was a good hit he got on you. You're going to bruise like that pear I left in our bunks too long."

I shoved him off. "Albatross eyes, don't tell me things like that. I need to sleep there tonight."

"At least you're both still optimistic," Saresen said dryly. She clung onto the great chain along with two other students. "We have to pass to make it back to our bunks."

Boivi-al pushed Mon aside, gave my face a glance, said, "No concussion, turn around for me, princess." I scowled, turned, and the Cici woman ran her thin fingers gently down my back, thumbs lingering on a bruise and pressing deeply. I grunted. "Nothing deeper than dermis," she said, without mentioning my numerous childhood scars, and left me to inspect Patral's leg. The sea plastered Boivi-al's shirt to her mutated back, revealing the deformities of her wings, each the size of my spread hand: too small to do much except grow twisted and wrong, and too large to hide.

To one side, I saw the other Asieli, Miguel, leisurely treading water and humming a low, soft tune: the same melody I heard Patral attempt. I felt the water bear my weight, leaving my

face and shoulders above the surface. In the distance, waves tumbled in the mist, fading to Miguel's cantabile when they reached us.

I rubbed at the ache of the bruise on my face and looked up the chain to the shadow of the small floating island. It was suspended there, chain chattering with the wind. Now that I finally saw our destination, it was only the size of one of the dorm rooms at the pentagon dormitories, hardly a site for examinations, which confirmed the suspicion that the cut chain was definitely part of our second test. "What's going on?"

"Dalton Twelve dropped with us from the weight of all the scholar students on it," Mon said. "But once all of us were flung off, it began to rise again. From the setup of this situation, I believe we are supposed to use Dalton Twelve to get back to the city. A few of us tried to call the dragonflies, but they wouldn't answer. Only way I can think of to get back is by speaking in Cae and summoning aid, but that effectively means we're dropping out of the exam."

"So what's the problem?" Patral demanded. "My leg needs to see medical attention before storm falls." My ears perked. It was a curious claim, as a displaced patellar was serious, but not so urgent. Especially not when floating in seawater was the equivalent of bed rest for an Asieli.

"Well, you can see why, Patral," I said. "The chain's not rising now. Means there's not enough dormant earth-stone contained on Dalton Twelve to lift all of us. In fact, if we all cling onto it, we might sink the island altogether. Maybe this is the bulk of the test: that we have to fight each other for the pass."

I heard Saresen's sharp intake of breath and resumed a half-hearted paddling to warm myself in the water. My words had the desired effect, and the scholars around me shifted uneasily. I spotted a few hands straying towards their waists beneath the water. I flipped the latch from my pistol sheath.

Mon also gave me a glare as he swam to the general center of our little ring. He smoothed back wet hair into stalks of wheat against his scalp. He smelled a little like dog. “Hold up. We’re scholars, aren’t we? The first thing we need is information. I mean, perhaps this rock can lift all of us if we ditch equipment. We just don’t know, right? Does everyone know their weight?”

“It’s not that simple,” Tolly cut in, clutching the chain. “Even if we know our weight, we don’t know the weight of our gear, compounded with water.”

Impulse on the chain shoved the heel of her palm into Tolly’s face, her long, sleek form and blood red skin was crusted with sea salt, but she was not as wet as the rest of us, with rainwater sliding off her thick shoulders and rounded joints. She had obviously not fallen into the water. “We could rise if we left the whale.”

Tolly bit his lips and said nothing. The man did not look heavy, but like the scholar student I sank with, he was a Tomkol, a stone man, with a far greater density than any other ethnic. If he released the chain, he would sink as quickly as metal of equivalent volume. To my left, Boivi-al raised her hands and said, “If that were the case, but it’s not. Altogether, Tolly and his gear don’t weigh more than three of the rest of us. The arithmetic doesn’t work out.”

“Boivi-al,” I said, “can you estimate our weights to o-two-digits?”

“I’m a Cici, princess,” Boivi-al bubbled. The lower half of her face was submerged in the water. “Of course I can. But what is more important is that we climb up and survey the earth-stone contents on the satellite. We should see how much weight this rock can actually bear.”

“I didn’t bring a kit,” Saresen said roughly. “I thought this would be a physical exam.”

“I did,” Mon said. “But I don’t know if one set has enough vials for a full analysis.”

The other scholar students tittered to each other. Boivi-al waded to us and held up a soggy bag filled with small vials and a set of carved glass micromonocle, a precise sun-stone light and a pressure pen. “But we are scholars, aren’t we?” Boivi-al said with a smile. “I will find our

weights. Asieli need to stay in the water, and Tolly too, but the rest of you should take turns up the chain.”

And so we watched as Hansil, Moray, Impulse and Ueshar scrambled up the chain to the island with a simple apothecary kit. Through the fog, we watched them climb a short ways in silence while the chain shifted under their weight.

“Kaya,” Saresen called.

“What?” I turned, but instead of speaking, Saresen observed my face before making an expression of disgust.

“You didn’t even mean it this time,” Saresen accused, hands flailing in the water. “That excrement you said about fighting for spots. Why do you say these inflammatory things? Do you want a fight? A ruthless competition abiding by nothing of the decorum regarded between scholars?”

“No,” I said. “I said it because everyone was thinking it, and it’s better to say it out loud than be backstabbed later on. Right, Mon?”

“Of course we were all thinking it,” Mon said with a groan. “Saresen, you too. Why are we still arguing about this? Get to work. The least we can do to help right now is keep ourselves active and triangulate our location.”

“Monci and Kava,” Saresen said, still embittered. Fish and disease-ridden bat. She reached into her sleeve for the filled Loai entrance card. The back, across which a map of Albatross Landing was scrawled, Saresen held up against the fog and dropped her hands a little. The card turned, rotating in the magnetic lines surrounding the city vicinity, and floated down to touch her palm. “Well spread out!” she snarled. “Can’t triangulate with one point.”

“I need to find a derogatory name that sounds like Saresen,” I said, splashing down next to Mon and pulling loose my own card. “I’ll take south point then, I guess.” I let the card settle and waded southwards.

“West is always the loneliest direction,” Mon sighed, referring to a popular song I’d only ever heard in passing. “If fathers are in the north and mothers are in the south and virgins in the east, what does west ever get?”

“Not silence, evidently,” I muttered. “And anyway, you’re misquoting. I’m pretty sure Saffron sang... well, that word we don’t have in Ha that means loved ones. I’m pretty sure she was not a deprived pervert.”

“Shieras’en,” Mon supplied.

“What?”

“That’s Asieli for dirty laundry,” Mon shrugged. “Not perfect, but she has the fortune of a long name.”

After a momentary confusion caused by Patral’s card being defective, we were able to determine, through Mon’s usual mathematical talent, that our current position was three degrees south-east of Albatross Landing’s morning coordinates. We repeated the process with sets of three cards. By the time Boivi-al took our weights and we located ourselves, the others crawled down the chain and dropped into the water.

“It’s rough up there,” Ueshar said, shivering. “Couldn’t see a thing.”

“We got the base substrate, the vegetation, and the upper aura,” Hansil informed us, expression grave. “We’ll tell you the numbers afterwards, so you don’t form biases.” And he beckoned us upwards with Boivi-al’s kit outstretched.

We climbed: Mon, Saresen, Tenma, and I. I was a little more uncertain about the inclusion of Tenma in our quartet. I didn’t know the Kiin man well, and he certainly didn’t stand

out the way Mon and Saresen did. We reached the satellite edge, which careened backwards from our weight as we climbed on. Mon gave a yelp and Saresen reached down to pull him up. We clutched at the earth and mossy vegetation beneath our hands and feet, panting as Dalton Twelve slowly stabilized a dozen hands lower than its original orientation. After a moment, I sat up and carefully stood. Mon pressed his hand to the ground, pulling a knife from his wet pant pockets to hand to Saresen.

Saresen stripped a few plastic bags from her wet pack and tossed them at Mon's feet. With one last glare in my direction, she stalked to the nearest edge and uncoiled rope from her belt. Being the slightest of us, Saresen was the obvious choice to drop over the edge of the satellite to investigate the deeper foundations.

"We might have a problem," Mon said, looking between us. "Unless either of you can brace each other or my weight, we'll only have one surveyor down at once."

I waved my hand, flushed. "Don't look at me," I said. "I've a strict policy of no extensive physical activity. I'm not even sure I can act anchor for Saresen."

"That's really a little pathetic, no?" Mon asked. "Tenma? Why don't you anchor Saresen, and Kaya and I will handle the numbers." He didn't wait for the other Kiin to respond before grinning at me. "What I mean by that is that I'll do numbers, and you can check them."

"Check your numbers?" I complained. "Mon of Jhermeg's numbers? I'd be more useful suckling on my thumb and waiting for thunder."

"What's the holdup?" Saresen called to us. "Exam doesn't last all day. Patral said we had until it rained."

"Interrupting you lot," a new voice cut in, low and melancholy. "You obviously have very important business. If Kaya needs someone to anchor, I can do it." I looked up to see Quip perched at the edge of the small floating rock. He was barefooted, with his wet shoes dangled

over his shoulders. Like Impulse, he did not appear as wet as the rest of us, and the hems of his tunic were actually dry and pale. Mud from Dalton Twelve soaked up his leggings, and his claws marked deep holes in the substrate.

I gasped, jumping up. Dalton Twelve swayed dangerously to one side. The fading cut along Quip's face was painted with bruises, but there were no supervisors or superior numbers here if the Seb decided to enact violence. I swallowed and adopted the same expression with which I faced my teacher when she lost her temper.

"Whoa, have you been here this whole time?" Mon asked, startled. "We didn't count you among survivors. And you didn't show yourselves to the first party. Where were you, in the foundation?"

"Quip," I said, wiping mud off my bare knees, but could not think of anything else to say.

"Glad you are safe, Kaya," Quip said. "And yes, something like that. Disappearing is something Sebs are good at."

"Good, good," Mon said happily. "Between you and Impulse, we'll have two Sebs to rely on. Makes the notion of a physical exam far less daunting. If you're alright with it, give Kaya an anchor so she can examine the foundation."

Quip's normally mild face grew pinched and uneasy at the mention of his fellow Seb. He wiped rainwater from his face with a wrist. "Do you have rope?" he asked.

"Saresen does." I wrapped what remained of my bandages around my hands. My coin was still and quiet below my collar bone, and with the ocean so close below us, Quip would not pose a threat as an anchor.

"I do," Saresen called from across the rock, uncoiling said rope from around her waist and tossing it to us. The weight of her movement swayed the rock precariously and I crouched to keep my balance. She bundled a handful of plastic bags together, knotting the ends. "This too."

Quip wound the length twice around his left hand, then around his back and handed me the other end. “Are you still worried about my fight, Kaya?”

“You better not drop me.” I bound the rope loosely around my hips and tucked the bags into my shirt, into the large pocket underneath. Stabilizing myself on the ragged rock, the edges digging into my bandaged palms, I braced my knee against the side of the rock and stepped below with my other foot.

“You don’t want to know?” Quip asked from above.

“Not anymore. Whatever your issues are, just leave them out of the exam.” It was a lie, but one I was determined to maintain. I hooked my left arm around a protruding root and swung down into the fog. The moisture rushed up my nose and I shuddered at its passage.

The earth above me was wet, and my foothold was tenuous. Dalton Twelve was thicker vertically than it was wide, with loose debris and dirt held together by the roots of the blackwood trees above. Its foundation tapered towards the sea directly below. On a reversed incline without proper climbing equipment, arms were far more reliable than legs, unless one was a Cae with opposable toes. I wondered if Saresen had opposable toes. I resolved to look next time we bathed. I managed to cling to the dark substrate and grasping root systems, almost horizontal below the island, and slid myself within a loose netting of unia tubers. There, I rotated my ankle into the embrace of a blackwood root, coaxing it around my calves to take my weight. Reassured that the tree held me securely, I released my hands.

I dangled there, a few hands below the island, and patted down the topsoil for the minerals within. Earth-stone was a darker hue compared to the substrate around it. Its veins were clearly visible, framed by fertile soil and the faded scars from groundwater. Unfortunately, the veins of earth-stones could not react with the magnetism of the world core. They were dormant and tightly sealed within themselves. It was the loose particles embedded in the soils that had

enough surface area to levitate us. Using the flat edge of my ratide pocket knife, I scraped an amount of substrate onto the unsheathed blade. About two finger's widths above the hilt, a small line was scored into the metal to indicate a universally standardized dram, and the blade was far more suited to scholarly in-field sampling than cutting or stabbing. I tipped the dram of substrate into Saresen's plastic bag, bound it, and tied it to a corner of my shirt.

For the second sample I dug roughly two hands deeper into the island. Carefully, so as not to lose earth-stone, I withdrew a small dram of dirt nestled on the side of my blade, placed it within a second clear plastic bag, and repeated the process with the third sample, digging deeper into the island foundation.

I untangled my feet and shifted myself towards the far side of the island, crawling through the thick root systems and took two more sets of three samples from the soils of Dalton Twelve. By the time I was finished a fourth, sweat beaded across my forehead, and I was slightly light-headed from the lack of air beneath ground. I tunneled out of the roots, braced my legs on the side of the island, and tugged on the rope. I wiped a long handful of rainwater from my skin before allowing Quip to pull me upwards.

My anchor pulled me slowly and steadily upwards, as I carefully shielded the plastic bags of samples from being shaken or disturbed as much as I could. I collapsed onto the island edge and panted, shaking off Quip's offered hand.

Quip looked a little hurt. "The reason two Sebs of similar prowess pair is so they can check each other. Our fight was because one of us stepped out of bounds."

"Where's Boivi-al's kit?" I called. Mon and Saresen exchanged a glance before tossing the package across the rock.

The contents of Boivi-al's case were neatly labeled, and small vials containing similar substances were bound with elastic bands.

“Saresen, Mon, you used oxalic to clean the earth-stones?” I asked when I noticed one of the vials was nearly empty.

“Sure, why?” Mon answered. Saresen frowned.

“It’s corrosive to hema, which might throw the final results when these soils are so rich in it,” I said. “Ditheon or a ten-seventeen mixture of sulfite and citrate is better. Should we keep it consistent between our tests, or do you want to do over?”

Before Mon or Saresen could answer, Quip spoke, “we should conserve time. Oxalic should work well enough. We’re hoping for an estimate anyway.”

I shrugged and placed a drop of oxalic from the appropriate vial in each of the bags, reached inside with the pressure pen and blasted the substrate apart so the chemical could work in. And then, I rotated each bag in an elliptical orientation as best I could with the swaying of the island.

After a few blinks of rotation, I tilted the bag in the air before me so the earth-stone, sifted from the remainder of the soil, hung suspended inside, acclimatizing to the propulsions of the earth below us. It was dark with the fog around me, so I lit a sun-stone and estimated the earth-stone content in the bag.

I stared at the levitated particles within plastic for longer than strictly necessary, reformulating numbers and hoping to be incorrect. “Mon, if the proportions are fifty-three, four, and seven on average, there’s no way this rock’ll lift all of us, right?”

“It’ll lift seventy slugs, so no.” Mon bit his lips. “Our results are proving similar. Fifty-two for Saresen, and when I finish I suspect mine will echo.”

“So we need a lot more surface area. We’ll need to break apart the veins, Saresen, any idea how?” I asked. The young woman wrung the last of the moisture from her braid and frowned at me. At least her tempers and disapprovals passed quickly.

“I think your first idea, however misleading, was more doable,” she said briskly.

Mon flung his dirt to the ground, and a few stray grains of earth-stone floated upwards, hovering to some invisible hierarchy in the air. Mon repeated our numbers with a somber face, fingers twitching, and then cursed. “No, there’s no way we can all make it up with so little levitation mixed in the soil. There’s a lot a scholar can do, with Cae and such, but breaking gravity is not one of them.”

“No, but we need to,” I told them. “regardless, we should let the others know.”

The five of us clambered off the rock and dropped into the ocean below.

Quip and Impulse did not look at each other.

As we relayed our information and Boivi-al gave us a sobering weight of two-hundred-fifteen-o-o-eight slugs, a brisk rain pulled over our heads, and we saw brief flickers of lightning in the fog. I knew Mon calculated the precise probability of our rock or location being struck by lightning from the movement in his fingers. I also pulled my qi tightly into my body, for fear of drawing energy with energy. Without the protective cover of houses and the warmth of food, all the scholar students began to look as miserable as I felt. Several were shivering: slight movements in their hair and the color of their lips. With the exception of the Sebs, who seemed to thrive on physical adversity, everyone was reaching a limit. Patral had taken over singing to the ocean and Miguel sagged, drained, against the chain.

Without speaking, we clambered off and allowed the shivering students access to the chain. Whether because the first test had weeded out uncooperative elements or because the other students were too exhausted to rebel, we floated in silence for a while as the water carved wrinkles in our hands and kissed the heat from our skin. Finally, Patral spoke up. “We want to finish before the flesh of the storm hits us. We can’t possibly excavate without equipment and time.”

“So then what, should we resort to my earlier recommendation and fight it out?” I demanded.

“If it is a fight, I am ready,” Quip said, completely drenched and happy as a dog. “At least it’d ensure a handful of us pass.”

I caught every scholar student, excluding Impulse, pulling speculative gazes over Quip’s long, scarred body and the serrated carving knife at his side. I saw them attempt to remember Seb statistics, and the slim probability of any other ethnic besting them in fair physical combat. I knew I could not defeat him, and likely not Impulse either, even with her injuries. No one else responded to Quip’s challenge.

“What if...” Ueshar began. He looked far more tired than the scholars around him, and his lips were more blue than safe. Shivering a little myself, I swam closer to him and wrapped both hands around his shoulders from behind. The boy startled, but sank into me as I released qi heat from my skin. “I was thinking about it while you excavated. What if we... d-didn’t process the earth-stones, but we activated them?”

The reason only a sand grain’s worth of earth-stone was necessary to lift a landship was because all stones were processed and then activated with a great abundance of energy. “But where would we...” I stopped speaking as I noticed the boy was looking skywards, into the rapidly darkening fog and the occasional pulse of lightning.

The thought occurred to most of us at the same time, and some made vague gestures to the Albatross deity.

“A way that doesn’t kill us all would be preferable,” Saresen said. “While I am fluent enough in Cae to call down the lightning, it’d be imprecise and probably kill us all.”

“No,” I said. When the others turned to face me, I swallowed and continued. “We’ve something a little closer but not a bit less dangerous.”

A grin spread over Boivi-al's face. "I wondered what was missing," she said softly. "Lisarel Amona gave us a jackknife."

Spit. The serpent creature. I gaped at her. "Patral and I saw it. Did you..."

"Amona's specialty is macroscopic marine ecology, especially in how the biology of leviathans and whales reflect microscopic changes in the ocean. The Ogum Quill is one of the ships she donated." Boivi-al fiddled with the straps of her pack. "Jackknives are a significant part of leviathan niche. It wasn't a difficult leap."

Patral gestured while continuing her song. Something must've been communicated, because Miguel promptly took over the songs, allowing Patral to speak. "I didn't want to alarm anyone before. Miguel and my songs have kept it and anything else from noticing us, but yes, Boivi-al's right."

I'd mentioned jackknives first, but of course Boivi-al was right. I took a moment to feel the sting.

Instinctively, all of us ducked our heads under the water, searching for that pale, serpentine danger. None of us saw it.

While I had known on some level, and I knew Patral was covering it, my heart still pounded when she spoke up. Jackknife: lightning-eater. A jackknife was not a particularly large creature, only double my height in length, and the width of my thigh, but in water, it was possibly one of the most dangerous things in the Thumbprint: a carnivorous eel-like creature which released electricity enough to power a kingship for a decade. It is commonly known among layfolk that jackknives ate lightning. Realistically, they did not eat lightning so much as store it, because while they generated electricity naturally, they did not generate enough on their own to kill those who fed on them: the island whales and leviathans. Unlike lightning from the skies, jackknives were also very, very precise.

“Lisarel Amona must’ve caught it and bound it here,” I muttered. “Let’s get going. It wouldn’t do to have night fall and that jackknife throwing lightning all over the ocean hunting.”

“Wait a moment,” Hansil said. “I’m not sure I understand. How do we provoke a jackknife into attacking the island? And how is that any safer for us?”

Mon swam between Miguel and Patral, who both bore his weight. “First part is easy,” he said. “Fish half-sleep. I don’t know if jackknives dream, but I’ll give it a nudge in its sleep to come this way, and confuse it just enough for our purposes.”

Tolly was already taking a deep breath. “And the electricity doesn’t have to hit the island, just the chain and the power will conduct up. I may drop like a stone, but I can also hold my breath for half a flap. Since I’ve the least water content in my body, I’m closest to being an insulator. I can survive a hit. We’ll just need two or three others to grab the chain and anchor the island or else it’ll lift up without the rest of you.”

There might’ve been dissent. I could see the shadows of it in the frowns of the other scholars and the downward turn of their lips: fear and insecurities. Boivi-al cast her gaze around and gave a sigh that morphed midway into a cough. A sneer grew on Quip’s face: an expression I suspected was disdain. However, it was Saresen who finally spoke, in that rough, magnetic voice used to speaking Cae. “This is rather amazing. I’ve never seen a jackknife so close, and I’ve certainly never been privy to experience lightning safely. I’ve always wanted to know. Imagine the story of it.”

And like Mon and I did on the Ogum Quill, the other scholar students responded to the bright lure of her voice. We could not wait to bait the jackknife after she spoke. We wanted to know.

“Tolly, come here and I’ll give you a few words,” Saresen said. “And plasterine tape so your hands won’t burn.”

“The chain will be flashheated the moment the jackknife strikes,” I said to Hansil. “So the only people who can weight down the island are Molas, since you’re tolerant to extreme temperatures. The rest of us will try to stay out of your way.”

“Ready?” Mon said.

“Right,” Tolly said as Saresen finished winding bright blue tape around his palms and fingers. He pinched his nose, and dropped down the chain into the water. Miguel ducked his head into the water, and Mon closed his eyes to sleep.

It turned out jackknives do dream, but not in any way I have words to sufficiently convey. They do not dream of scents or sounds or sights, but of electricity. The tingle of small creatures, and the steady sparks of behemoth heartbeats. It dreams of its own heartbeat and those reaching down from the sky that it need to jump to catch. It dreams of the painful spikes of lightning on its fins, in its throat. In this jackknife’s dream, it detected a pulse of life above it, to the south and east. A turtle, the electricity told it, slow but succulent when baked within its shell by the heat of its breath. The jackknife wanted turtle. It hadn’t eaten turtle in years, not since it was young and too weak to hunt larger prey. It was not a particularly nostalgic creature, but turtles were desirable. The jackknife opened its opaque, obsolete eyes, and lifted its long body upwards, following the small currents of energy in the waters towards us.

Or at least, that’s what Mon relayed to us afterwards.

The rain came in a torrent. Lightning sprouted down like reversed, withered trees before extinguishing. Miguel pulled his head out of the water and shouted to be heard over roar of the rain. “It’s coming!”

I blinked hard, ignoring the sting of salt on my eyes, but I could see nothing in the gloom beneath us. The group of us waited in downpour, struggling to breathe. The rain was vaguely salted as well, and my heart pounded faster and harder from the slow drain of dehydration.

Ueshar finally gave up his pride and latched onto my back. His frail limbs were icy and he could not stop shaking. “How long... will it be?” he asked. “Isn’t it taking too long?”

I shook my head. With a growl of frustration, Impulse dove down and reemerged with Miguel’s shirt bunched in her large hand. “It’s coming?” she demanded.

Miguel writhed in the Seb’s grip. “The jackknife isn’t taking the bait,” he said. “It’s just circling. I don’t think it’s going to work.”

I could feel Ueshar shake harder upon my back. His hands were fisted in the fabric at my shoulders. I imagined what a little boy without qi would feel, too small to generate physical heat and too enamored with the concept of scholarship to surrender and cry for help. We’d been submerged for several flaps by that time, long enough for the salt and cold to affect our bodies. I looked over at the other scholar students and their wearied, despairing faces.

“Then we should’ve done this in the first place,” Impulse snarled, shoving Miguel aside and swimming for the chain. Several of the others attempted to stop her, but were promptly thrown off. Patral cried out as her injured leg was jostled. Impulse drew a colt and I wondered at her choice in weapon, as my pistol was the only one which could possibly still function under water, since was powered by my qi instead of gunpower and ignition.

I could use my pistol.

The harmonica gave a pulse of heat against my thighs. My coin hummed.

“Stop it!” I let my shout join those of the other scholars. “Wait! Don’t fight! It’ll work! It’ll work. I... I know it’ll work!” Finally, Impulse and the others glanced at me. I unlatched Ueshar from my back as firmly as I knew. “We just need a last push. Miguel, I’ll need your help.”

Without waiting to see whether Impulse heeded me, I dove down as deeply as I could, following the chain, until my lungs cried and the water pressure clawed at my throat. I bumped

into Tolly, and he jerked back in surprise. There, blinded by water and salt, I drew my pistol and pushed qi into it.

I felt the touch of Miguel's hand on mine, pulling my aim down and to the left. When the aim stabilized, Miguel gave me a soft tap on my shoulder. I tipped the trigger and felt the qi drain from my fingers. The recoil tossed back my shoulders. Immediately, I pulled a second string of qi from my elbows and aimed again. I needed to breathe.

I sensed more than saw the jackknife's attention. Something in the way the water changed and the bubbles sliding up my skin seemed to gain sentience, flinging themselves off my skin. A flicker of white appeared in my stinging eyes. And then Miguel took my elbow and screeched something so shrill and sharp it broke the waters around us. We shot outwards, and I tried my best not to struggle as Miguel propelled us away, changing directions as sharply as only marine creatures could manage.

We all knew precisely when the jackknife shot its electric pulse. The jolt struck inwards. I forgot I needed to breathe. The shock interfered with my heartbeat, and for a brief moment, the organ stopped before starting again at double the pace. Miguel and the water around us never faltered though, and I could sense our bullet ascent. When we broke the water surface, I choked and could vaguely hear Miguel shout to the others, and then we were pulled sideways by the currents.

"Grab hold," Miguel hissed in my ear. I wrapped my arms around the chain and plastered myself to the heated metal. The chain burned against my hands, but was not hot enough to break through my thick callouses.

"Did it..." I didn't need to finish the sentence though, because the chain was being drawn upwards, even as scholars clamored to grab hold of it.

“Snakes and birds and trees!” Saresen shouted from somewhere above me, frantic and more panicked than I had ever heard it before. “Kaya you brainless spit! Birds! Whistling... cret... You shot it! You shot a swarming jackknife! I’m going to throttle you, you little spit!”

But I was laughing, wiping seawater and the sting from my eyes. “Isn’t that because Mon didn’t do his job proper?” My grip loosened a little, and I would’ve fallen if Boivi-al hadn’t grabbed my shoulder and urged me to climb higher.

Below us, the jackknife leapt from the water, scale-less serpent form flickering briefly in the fog. It launched a second shot of lightning upwards. I cried out, and Saresen shouted something from above me. The lightning arced down halfway, striking harmlessly into the water. Quip’s long bloody carving knife struck a line in the fog past me. The blade struck the fish in its side. The creature gave a great roar, mouth full of pale lightning, and fell backwards into the ocean.

“Climb!” Quip shouted. “Get up here!”

I scrambled to the top of the chain and Quip lifted me by my shirt back over the edge of Dalton Twelve before reaching back for the others. The dark veins of earth-stone in the rock hummed, vibrating as they lifted upwards. The ground underfoot trembled. I couldn’t stop shaking. Saresen charged at me and tackled me to the ground, pressing my forehead against the ground. The motion rocked Dalton Twelve. “You idiot! Shoot a jackknife, will you? I’m going to bash your head in!”

I laughed and wrestled upright. It was only then that I noticed only eleven sat on the rock: Mon and Saresen, Quip, the two Asieli, Tolly, Hansil, Boivi-al, Tenma, and Ueshar. “What happened to the others?” I asked. “Impulse and Moray?”

The other students looked to each other for a moment, and that was when I noticed the bruises and that Patral's leg was crooked again. I opened my mouth to comment, but didn't.

"They were left behind," Quip said. "Don't worry, they'll shout for help soon."

"Albatross," I breathed. "This whole teamwork idea doesn't work as well in application as it does in theory. Dan Amona and the others are idealists. What in the spitting Thumbprint happened? Saresen?" I sheathed my pistol, fingers lingering on the catch where the white harmonica was also sheathed.

"Same thing that was happening before you dove under, Kaya," Saresen said quietly. She gestured vaguely around the circle of scholar students. "Impulse dragged Moray off the chain, broke two of her fingers, and prevented everyone from approaching, so Quip stabbed her. I'm sorry about Moray, but it happened fast and only a Seb can handle a Seb."

Quip scratched his bare belly and grinned at me, showing all his teeth. "I didn't think you'd practiced that pistol every night for show. I don't practice my knives for show either. Are you easy about Impulse and I now?"

"Quip, those were..."

"Impulse was dangerous," Quip said.

I didn't answer, merely leaned against Mon and Saresen and closed my eyes.

We drifted upwards. Dalton Twelve spun in lazy clockwise spirals. Quip and some of the others still with strength left hauled the chain up over the ledge. We crawled, tired and cold, from one side of the rock to the other, to drive our rising vehicle towards Albatross Landing above us, wreathed in fog and flame-colored leaves. We felt a moment of terror when we were caught in the city's great root systems, but eventually unwound ourselves in the rain and lifted up over the edge. When we sailed overtop, Quip took one end of the chain and slipped sideways off the rock, hooking it on the nearest root, anchoring it place. Dalton Twelve gave a lurch, and we had arrived.

The scholar supervisors, Amona and her two companions, waited for us by the albatross statue before our dormitories. They did not bother to stand as we stumbled along the edge of the path, supporting ourselves along the trees.

“Well,” Amona set aside her mug. “I knew some of you would make it.”

Excerpted from: *The Beginnings and the Whereabouts of All Things* by Milam si Sorenti

...Gut and Initiative

The common saying “gut and initiative” originated in Sebya, stemmed from the Seb ability to form enmity and loyalty in less than a flap. (ct. 1944, Talon) The judgments made in these brief intervals of time are absolute, and few Sebs will act against these initial impressions, though their favor is not obviously shown in language or common social gestures. Thusly, the most important factors in socializing with Sebs are to make the best first image, and to recognize already existing relationships. (dc. 1106, Jorges)

Prior to the eighteen hundreds, it was not unusual for individuals to meet a Seb for a day and gain either an enemy who would haunt their steps and kill their loved ones, or a friend who would guard them and slay those who show the slightest offense. (dc. 1087, Jorges) The Arwin Convention lodged a formal request to Sebya in nineteen-forty-four, requesting a modulation of Seb activity outside of their kingship. (ct. Cxivlu, 1944) Sebya accepted, though their representative, then Blooded Talon, commented that, “Perhaps it is the way of my kind, to act on gut and initiatives.” (dc. Hiran, 1944)

Backett's Box

Year 2069, Ogum 45

The Tomkol youth who crushed me in the second exam survived, and was seated drenched in the canteen when we entered. Dejected, he informed us he'd summoned help and would be leaving on the Ogum Quill to the nearest port along with Moray and Impulse, who glared with strained lines around her eyes at Quip.

The remainder of the group was given a further ten days to rest before our third test. This time, we needed the leisure. Ueshar was bedridden for the duration. Some of the other scholars now began to panic, starting the preliminary researches of their stories. This time, we all felt the loss of our numbers. Tenma drank tea the way my uncle did after a battle. Hansil and Moray were cousins, and after Moray failed, Hansil strutted around the dormitories as if all of us present owed him a great debt. Quip said nothing, but I noticed he stayed in the canteen late into the night: an act which contradicted his motto of rest and health. There were less of us now, and I knew his bunk room was completely empty. I sat next to him in the canteen after the others had left.

"Truth of the matter is," Quip told me, picking at the skin of his thick saur broth. "One of the scholar students died during the first exam, I heard. Sienne Rores, the skinny little Asieli who failed too quickly to make an impression. Impulse and I confronted over it, and what it was, was the way it was."

"Why didn't you just tell me?" I asked. "You enjoy being misunderstood."

"I would've killed her, Impulse, that is," Quip said simply. "You must understand, Kaya, that Sebs form loyalties based solely on gut and initiative and we prioritize those loyalties at the cost of all other aspect of our lives. I would've killed her again during the second test."

Which told me nothing of his motives except that he regretted them. In retrospect, perhaps I projected my own guilt, and Quip felt no such emotion. At the time, what I perceived as his regret gave me enough cause to forgive him.

I pried the last of the flesh from within my roasted cricket leg. I set the carapace aside and said, “The second exam was different. We were despaired. It drove me to shoot blind at a jackknife. And you’re a Seb. I didn’t think you would fret so. Sebs’re immune to injuries like this. They’re immune to pains of the mind as well as the body; isn’t that what separates Sebs from other subspecies, distinguishes you from me? Isn’t that why I should’ve tittered and speculated about murder and foul play, but you should’ve just told me?”

I patted him once on the forehead and waved two fingers, as Rogel would’ve, and left for the room I shared with Saresen and Mon. Boivi-al saw me pass in the hallways, but did not greet me, merely smiled at me with her wings and dodged the question about her smile which formed between my teeth.

We’d finished our story, and both Saresen and Mon left me with the long road of edits and revisions. Though, they did not grant me the leisure. Not a day passes without them shaking my bedframe at too-early a light and demanding that I dress to visit one place or another on Albatross Landing. We were not allowed to go far, as our entry cards gave limited access to the city. We could, however, visit the earth-stone factory which bordered the pentagon and volunteer for mineral polishing. There, we learned the process from the workers, and to my chagrin, they used oxalic as a stone-cleaner as well. We visited the caves with the balmung and ant corpses again, though much of the tunnels had been sealed away, and gathered a few samples to color in our spare afternoons. We were joined in these ventures by handfuls of other students each time. Boivi-al showed us a tiny juice booth in Dalton Eight that converted the sting of ant acid with

fruit sugars into a mind-stimulating energy beverage which claimed to rival spices. I did not agree, but I was not adverse to sweet things in the least.

On one of the nights thereafter, I tugged on Mon's braid, the one at the base of his neck which presented an easy target with my height. It was a little greasy. I considered telling Mon he should follow Saresen's example and bathe more often. "You've grown a terrible habit, Rim," Mon growled, rubbing his neck and shoulders. "Abusing me when Saresen's snuck off to the baths."

"Are you in lust with Lo An-tar?" I asked.

He laughed. "You're blushing! What filth are you picturing? But yes, like Amona's in lust with leviathans and Saresen lusts after... actually... I don't think she lusts after any in particular. She wasn't raised right, after all, not like us. And like you're in lust with the phantom continent, which, if I might add, is insane." He tilted his head so his braids tumbled over the tattoos on his bare shoulders. "The story I lust after just happens to also be a man."

"You've never met him?"

"Can't really, without being licensed." Mon's shoulders sagged. "Lo being River General and all. Not someone a little nobody Hali student can demand access to. Sometimes I wondered if I'd be disappointed. Maybe I crave his story but I'd hate the man, you know?"

I rubbed the blush from my cheeks and grinned. "You might. I hated him when I was a girl." Mon held his breath, wide-eyed and a thick hand on the frame of his bunk bed. I could see his heartbeat in his throat.

I hunted into my travel pack. My ashprint was crumpled at the bottom. The parchment of human vellum, my great-grandaunt's skin if I remembered correctly, was warm to the touch. Nearly catching my wrist-tail on other packages, I withdrew the vellum and unrolled it for Mon. The ash drawings across the print were gray and faded in the dim light: a blood pheasant

represented my ashline, and a willow my birth year. It was an honorable enough print twenty years ago, and the mandrake in one corner indicated that I was born in the capital. The ash pictures moved slowly on the vellum: the willow shifted, the blood pheasant preened, and the mandrake's leaves blossomed.

As Mon cradled my ashprint between both hands, I dropped down into Saresen's bunk and shook out of my socks. I pulled our finished story draft down from my top bunk and found a pencil from the tangle of my short hair. I couldn't help the upward curl of my mouth or the heat in my nose as I spoke. "Everyone talked about Lo so much, so I kicked him in the shins and beat him bloody at a game of tactem. Actually, I don't know if he'd played very much, so in retrospect I think I was a bully. To get back at me, he came to my birth tournament the next cycle and disarmed me in front of *everybody*. It's tradition to let the protagonist win at these things. So of course I spread a rumor that he liked candied squid hearts because he thinks if he drinks ink he can become smarter." I laughed. "Oh, he used to loathe me. Can't blame him now. I was a spoiled brat."

Saresen's laughter, unbridled and piercingly loud, startled me. She swept into the room and brushed hair back from my face. She smelled of chlorine and the wood-scented soap she favored. "Then, Kaya, you haven't changed at all," she said breathlessly between her laughter.

Year 2069, Ogum 48

After the ten days, we were instructed to dress, step into the main hall of the dormitories, and prepare for the interview component of our exams.

Because Mon, curse him, did not need as much morning sleep as the rest of us, he decided to prepare before the Sun was fully visible: an early, too early, first flap. He shook me awake after he dressed, patting my cheeks and squeezing my nostrils shut. I came awake with a start.

Mon grinned, saluted me, and dropped to the lower bunk. Groggily, I pulled a long shirt over my bare chest and slack legs over my longclothed groin. I stumbled down past the ladder and tripped when I reached the floor. Saresen was in her bunk, curling the last of a small braid into a larger one, twining it at the base of her neck.

“Mon wants to stand out,” Saresen said by way of explanation. “That’s why he’s prettying up.”

“This is a spitting examination, not a vid show.” I slipped on my thicker socks, with rubber grips at the bottom, and followed Saresen and Mon out into the corridors which lined the edges of the dormitories.

Mon wore an outfit I had not seen before, dark blue and hanging loosely from his stout shoulders, showing his back, and he had oiled his hair and mane. While he did not form a dashing figure, per se, his dress accented the rich textures of his hair and the warm darkness of his skin. I looked to Saresen and realized she had taken pains with her dress as well, wearing a dark red sash across her chest and burnished gold ribbons in her hair. For once, Mon was quiet, wearing confidence in his lopsided smile and his strut. Saresen looked precisely as she usually did, but with her newfound sense of fashion, she could be mistaken for one of the Tepeu’s own. I glanced briefly at my own grass-stained tunic and ragged leggings and wondered if my appearance violated any rules. My teacher had never dressed fancy to meet anyone and I didn’t own anything better.

The fading violet night entered the dormitories through the long windows. Our footsteps were conspicuous in the dimness. Two sides of the pentagon later, we turned inwards, bypassing the canteen for the central room. The arched ceiling opened into a vaulted dome, with birds painted across the broad tiles. The green-gray stones underfoot were cool through my socks. Old wooden tables stretched along the walls, reaching upwards to the ceilings with fingers of books.

Books nestled everywhere in that room: on the high window ledges, propped against the doors, and splayed face-down across the floor. Two teardrop-shaped sun-stones spun in synchronized spirals between the painted ceilings, dripping long lines of light along the walls. Plain wooden chairs were placed in a precarious ring around the room, with books tumbled at their feet and round hand-woven mats with green flowers draped over the chair backs.

The male supervisor named Cieger sat at one of the side tables, with a rust-colored sash around his neck and a pale top hat. He drummed his fingers on a thick tome of word roots. “Hello, early birds.”

“Good morning, Don Cieger. Are you conducting the interview?” Saresen asked.

“Not at all,” the man said with a smile. He wore a vow on his left ear: a single blue sphere which looked tremendously gaudy against his neutrally-colored clothing. “I’ve something far more interesting in mind for you birds.”

“So when does this exam start?” Mon settled into one of the chairs backwards, straddling the chair back. He pushed his braids behind his prominent ears.

“I’m not sure,” Cieger said. “I suppose it’s when everyone else arrives.”

“Do you have any advice for us?” Saresen asked.

The man lifted the hip of his hat, and his expression remained amused. “You’ll have no advice in the field,” Cieger said. “Other than each other and the skills you learned from your teachers and experiences. You don’t need me sprouting clichéd teacher-like nonsense.”

Snickers passed from Mon and Saresen like an illness borne by wind. I kept to myself that I enjoyed the redundant, didactic way teachers talked: it was a familiar and often self-mocking affair, especially when coupled with the knowledge that teachers very rarely acted as they preached. Instead, I dipped my head and searched for a comfortable place to snooze.

“Kaya, come on, really?” Mon laughed. “We should schedule you a nap flap from now.” I ignored him, pulled two chairs adjacent to each other and collapsed across them. The chairs were not particularly comfortable, and so I pulled down one of the green seat mats and draped it over my head. Interviews and exams were important, but activity before the Sunbird was simply too early. I stifled a long yawn and rubbed the bridge of my nose. My face dipped off the opposing side of the chair and I was suspended there, between the sounds of Mon’s quiet mockery and a space where I could play tactem with my father and have mother teach me the correct posture for holding firearms.

My rest was unsatisfactory. I heard the Sun’s wings mark the downstroke of morning proper. Its light entered the pentagon through long slits in the ceiling, stained orange through the butterfly wings in the vaulted windows. I was also aware when the other scholar students stumbled in. Most were dressed well, but to my relief, I was not the only one two stitches away from sleepwear and longcloths. With a groan that did nothing for the headache induced by lack of sleep, I lifted myself from the chairs and slipped the green mat down to cover my yawn.

Quip pressed a hand into my short hair, tipping my head forward, and laughed. “Kaya, if you’re so exhausted, why were you here before the rest of us?”

I pointed an accusing finger at Mon and yawned again.

My yawn was split in two as Cieger took position by the door. “Well, my birds. If you’ll follow me, I’ll show you to one of the wonders of Albatross Landing.”

The word *wonder*, almost as potent as *story*, jerked me awake. I considered the dozens of tourist sights around the city, places I’d hoped to visit after the exams but attempted not to think about: the largest dragonfly hatchery in Loa, the citadel created by language, the most extensive geomechanical library in the Thumbprint, the hall of coins. The single cut branch of the Whistler

tree, which bled iron and stones from its roots, grew leaves of fire, blossomed music and poetry, and bore fruit filled with embryos.

“You’re a doll, Don Cieger,” Boivi-al, who often chatted with the supervisors, said happily. “Whic wonder?”

“One you birds will be challenged at, but not one which will slake that desire I see rising in you.” Cieger shook his head. “It’ll be a long exam, so bring water and make yourselves each a sandwich at the canteen. If anyone gets particularly motion-sick, they should speak out now so we’ll take that into account during grading.”

“I do,” I said. When Mon and Saresen stared at me skeptically, I defended, “Well, a little. I do!”

“Then I’ll find something which travels well,” Cieger said with a smile.

Cieger proved himself a different animal from Amona or Rigma. As we prepared food and water, he hired us a cormorant: large creatures which flew with soft undulations of sandpaper feathers, rippling like the bare skirt of lace on an Asieli courtesan. It was not a vehicle most of us could complain about, as it was brisk and giant and gentle, with soulful eyes and a moan like a whale. Its heartbeat was a steady vibration beneath our palms and its flat chest expanded and collapsed with the mist it breathed in. With a powerful downward sweep of its wings that sounded deep in our eardrums and throat, the cormorant bore us upwards and the pentagon swept beneath us. We and the rain clouds both flew low over the canopy, and through the fog, I could not make out the people walking below, or the details on the buildings. Over the comb of the island range, across the break of the forest where dark dirt was infested with increasingly monotonous and monocontour buildings, the bird finally settled down on the dip of a crescent building and tucked its long wings under its dark belly. I slipped over the cormorant’s hunched

back after Cieger and looked up at the quadron dome which emerged through the weather. “What is it?” I whispered.

Mon snorted.

Saresen frowned at me, “It’s the Backett Box, Kaya.”

A series of life-sized paraboxes: puzzle boxes solved with levers and meticulously fitted wall pieces. Among them, the Backett Box was the largest and most complex, designed by a man who was rumored to break the six-hundred limit of the S.M.R. test. I should’ve known that; I’d stared at glossy photobooks of Loa’s life-sized paraboxes as a child, fingering the pieces on the thirteen-cube tangram my teacher bought me and fantasizing to one day walk through such installations at the place I might belong. I should’ve known the distinct shape of the Backett Box. I flushed and hid my embarrassment by looking downwards.

The fog obscured the inscriptions on the parabox side, but not the eight rows of twelve miniatures of the Backett Box, with hypothesis on how to solve the puzzle drawn in marker and pigment across the surface, and explanations for each move written in three-dot font. I wanted to inspect the tentative instructions as Cieger led us by, but did not have the time. The prints on the miniatures were almost too small to read without a micromonocle.

As we neared the base of the building, the tip was lost in the gloom. The structure was so large the rounded edges appeared almost flat, and an extendable ladder, currently short, led up to the entrance which sat just above my head. Wood and metal folded together, each piece the size of my forearm, tightly fitted against each other, their lock-and-key puzzle ends mashed together, and each intricately carved with writing: mediocre poetry, mostly. Before the structure was a small stone plaque, which read, “Backett-Gai Puzzle Box (Rep.)” and went on to explain that the structure was a ninety-five-thousand piece structure of unknown shape, because no one except Backett and his artisan Gai had been able to put it, and its replicas, to original form.

“Pair up,” Cieger said.

“We’re eleven,” Boivi-al said. “Would you prefer a solo or a trio?”

Cieger waved his hands. “You’ll be headed into the puzzle with your partner, and when you’re inside, follow the questions I have set down in each room. Answer correctly, and you should find your way out. Answer incorrectly... well, you might crush the puzzle solver in the corridor next to yours, or find yourself trapped in Battera Backett’s infamous unsolvable puzzle until you cry for help or perish of exposure. So you birds decide yourselves whether to go as a trio or solo. Most rooms won’t fit more than three.”

Boivi-al puffed up her chest, not unlike the old cormorant behind us. “I’ll go solo.”

“You’ve solved bits of it, Don Cieger?” I asked.

Cieger shook an index finger at me. “About thirteen-part-hundredths in ten years, so not overly much. Enough, however, to set this exam for you.”

He led us through the fog to the entrance of the puzzle box. The entrance was made of plain ulma lumber and a skeleton of alloy, coated with plasterine to guard it from Albatross Landing’s humid climate, with bars of stray puzzle pieces crisscrossing the top.

Mon and Saresen looked at each other, and then at me. “Kaya, if Boivi-al insists on going solo...”

“Go ahead,” I waved. “I’ll pair with Quip.”

“Do I not have a say?” Quip asked, but he grinned widely enough to display his canines and was already standing closer to me.

“I’ll need a volunteer to go first,” Cieger said cheerfully.

I took a brief moment to glance at Quip, who nodded, and by then Boivi-al was already giving a mocking salute to the rest of us. She took off her shoes by the ladder. She scrambled up the ladder with a minimum loss of dignity, and ducked inside the parabox.

“You will see I’ve posted a question on the wall, bird,” Cieger called into the box.

“Answer the question and perform the associated procedure. And remember, any wrong answer means you could crush someone in the next chamber over. There’s not much live room in there, I’m afraid.”

Boivi-al’s face emerged briefly in the entrance. “I’ll endeavor to be right, then, Don Cieger.” She then fiddled with something against the far wall of the box and with a great moan of wood and metal that seemed to come from all sides of us, her room was rotated out of sight beyond a puzzle wall.

“Second?” I asked Quip, but another pair was already climbing the ladder and kicking off their shoes at the base as Boivi-al had done.

We entered fourth, which Quip insisted was a fortunate number. I pulled off my thick socks and cringed as I saw splinters on the ladder rungs. I took the steps two at a time, and ducked low into Backett’s infamously unsolvable puzzle box. The floor within was the same wood-and-metal as the exteriors. The two materials were different temperatures upon my bare feet and I tried to step only on the wood. Ceiling pressed into the back of my bent head. Quip also had to hunch to fit into the small space, though he was not as cramped as I. We looked around at the wood and metal puzzle panels, hundreds of them stretching upwards to support the low ceiling, arching inwards as the dome sloped in. Several protrusions branched into the room. The pieces formed a skeletal tree with roots reaching deep beneath our feet. There was a question poised over the far wall, bedded deep into the infrastructure. “It’s a choicer,” Quip said, crouching near the panel. “What year was the Constitution of Charantos established? What, they thought someone would actually pick a date before eighteen-o? It’s eighteen-fifteen, right?”

“Far as I know,” I said.

“The instructions written after that answer directs us to move that forked puzzle piece on your left,” Quip said. “Give me a hand.” We pried the forked wood from its bed within the other fitted puzzle pieces, lifting the block on its joint and then, because the grooves matched together, slid it sideways.

In response, the room rotated and the exit behind Quip and I slid shut, sealing near the edges. The room around us echoed with mechanical sounds: the clicks of gears and the brisk scratches of bolts and levers. We were plunged into the darkness. After a moment, both of us struck our sun-stones simultaneously, and the shadows played upwards around the puzzle pieces enclosing us. Quip, who stood closest to the former exit either by chance or habit, gave the wall a powerful push. When the room did not open, his face grew solemn. “Looks like we’ve succeeded, if we’re going the right way.”

The parabox interior smelled like the soft whispers of resin. Quip licked his finger, twirled it in the air around his head, and licked it again. He smiled and shrugged when I looked at him. “The walls are moving. Let’s see if anything was revealed.”

“When was the Arwin Convention established?” was the question taped to the fork block. The answer, sixteen-o-o, led us to swing a block from the ceiling downwards and slot it between the doors. As we pushed, gears within the walls turned, and a small corridor of a height with my waist opened. I shuddered at the small size of the opening and the darkness within. “Sebs move first?” I suggested.

“Kiin arrive first,” Quip countered. I breathed several times, settled onto my hands and feet, and crawled into the entrance. I rolled my sun-stone forwards a few hands, followed it, and repeated the process.

“You claustrophobic?” Quip asked.

“A little,” I admitted. “Aren’t all scholars and their students? Aren’t you? It would make sense if the traits which make us good scholars also...”

I did not finish my sentence. The wall to my right rushed towards me. Metal and wood jeered behind the puzzle blocks. I yelped, threw out an arm. I caught the edge of the wall. My shoulder hit the other side. The pressure pushed at me, and I felt the strain on an old injury in my left shoulder. I gritted my teeth. The pressure of the wall against me seemed impossible to resist. My arms buckled. The wall crashed towards me.

Quip grunted. He propelled himself forward until his head and shoulder also lodged between the wall and I. I panted, nose touching the wall. I couldn’t move. Puzzles pressed into me. I couldn’t move. Help, I thought. I thought the word several times in my mind, but unlike the other scholar students, I did not know Cae at all. I’d closed my eyes and didn’t notice. I opened them to observe the long wall, the way the geometric puzzles fitted together: long cane-shaped pieces near the top, brushing into the grooves above, rounded pieces, triangular, but most of all, rectangular blocks with projections embraced around each other. There was a click as the wall locked position so it could not be pushed back, and then continued to press against us.

“I’m not scared of generic small spaces, no,” Quip panted against my feet, “but here the threat is legitimate.”

I shoved against the wall with both arms, but couldn’t move it. The pressure was still against me, and I knew if Quip’s powerful bone structure was not lodged against it, the wall would’ve crushed me.

“Can you crawl forward?” Quip asked.

“I think so, but you’d be crushed.”

“How troubling,” Quip laughed, and his voice was devoid of tension, which was why I believed what he said next, “I’m being underestimated. I’m already holding this thing on my

own.” In demonstration, he pushed with his elbow and the wall groaned against the chain and shifted, miniscule. I breathed easier with the finger of additional space, though it was more psychological comfort than physical safety.

“But the way on lets us pass the exam,” I said. “Can you crawl through? I think if we can just push the wall out an extra hand or so, we can slot a puzzle piece and stabilize it.”

Quip shook his head and said, “I’ll join you in a later room. Don’t stop until you’ve cleared the wall.”

“Spitting Don Cieger!” I shouted. “Spitting sadistic scholars and their sadistic exams!” I gave the puzzle wall a punch that vibrated down to Quip, and crawled on my hands and knees up ahead. I picked up the sun-stone and held it in my mouth. Behind me, Quip pulled back and the wall slid closed between us.

I did not make the end of the chute before my right wall crashed into me again. Once again my arms folded, but I did not spend my idle time in hysteria. I spat out my sun-stone and snarled at the wall. “I’m so spitting sick of you!” This time, I reacted quickly enough that the wall did not lock. With one hand, I attempted to slow the progression of the wall, and with the other, I reached for one of the cane-shaped blocks, twisting them counter-clockwise and sliding them into a groove in the puzzle-piece ceiling above. Then, feeling vindictive, I turned a round puzzle piece in the wall thirty degrees and pulled two others puzzle pieces apart. The wall gave an obedient rumble and slid backwards, sinking into the wall until I heard a shout of terror from the other side. Someone shouted for help in Cae, and I was slightly relieved that I did not immediately recognize the voice. It wasn’t Mon or Saresen or Boivi-al or Patral or Miguel.

I seethed in the moment of silence at the idiot who almost twice killed me from the other side. There was a sound of retching which did not belong to me.

“It wasn’t me!” a voice said, too loudly, from the other side of the wall through the thin space between puzzle pieces. “I told him his answers were wrong, and I don’t know why he didn’t listen. I told him there was probably someone on the other side. I...” This panicked second voice was far easier to place.

“Ueshar,” I called.

“Kaya?” The voice was softer now. “Albatross.”

“Your ass partner nearly killed me twice, and he might’ve failed Quip. Who was he?” I hissed into the indent in the wall. “If I ever see him again, I’ll blacken both his eyes.”

“It was Tenma,” Ueshar said through the gap.

Dread rose in me. I’d liked Tenma. He drank tea instead of coffee. He spoke with an accent that reminded me of home and lost things. I felt heat sting my eyes. He was an idiot. He had to have been an idiot because if he’d attempted to crush me intentionally... No, Tenma must’ve just been an idiot. I rattled the now-locked door. “Can you get over here, kid?”

“Don’t think so,” Ueshar said. “Kaya, do you feel dizzy when you’ve a fever?”

I hadn’t known the boy was so sick, just that he stayed in his room a great deal of the time. “Alright, we’re both on our own. Take your time, and I’ll see you outside, right? If you don’t know an answer, don’t just guess. Drowse for it, and observe the puzzle pieces too. Don Cieger figured the puzzle out without the exam questions pasted on.”

“Don Cieger’s...” Ueshar’s voice was muffled by the wall, but it sounded like a curse.

“I’m going. Be careful.” I continued to crawl until I reached the end of the tunnel. It was perhaps forty hands from the room Quip and I started in, and if possible, even narrower than the tunnel itself. A question was posted on the floor before the wall.

“The flag of Ciricici displays a bird with a single wing. What species is the bird?” I read out loud.

I reached for the ladle-shaped block on my left, and paused. Two answers made sense. The piper and the dorning bird were close relative species, with similarly shaped beaks and slender legs, but distinctly unique mating habits. I'd read both interpretations. I swung my coin and let its cool silver pathway decide in my stead.

Tanatas' desert was a predominant source of voice-stones. It used to be nicknamed the desert of souls because prior to the establishment of processing and activation facilities there, and before the locals were educated on stones, they thought the desert haunted, speaking to them in voices of the deceased.

The soft composition of malatide was twenty-seven to nineteen to hundred-and-three. The witching tower was an apparatus to distill neuramore from the blood. Elihati Giar wrote the song *Fields of Speculation*.

The questions became rhythmic, and I acclimatized to the tight spaces and low light inside Backett's Box. I'd long lost track of how many questions I answered, or where I moved after climbing up and down into different rooms, following Cieger's taunting questions. I could not hear the Sun through so many layers of puzzles, and I was not sure how long I remained there. My clothes were soaked through with sweat from the humid air inside, and I'd finished my sandwich and half of my water skin very early. I wondered how the scholars who dedicated their lives to solving paraboxes left from the fifth century dealt with the heat, or if they simply bore it as scholars often did for the stories they were partial to.

I read the question on the right hand panel twice before the words registered.

"Who designed this current installation?" I asked myself. Perhaps the easy question was prelude to an exit. I pulled the puzzle piece for B. Backett and Gai D., cranked it, and the wall slid open. I crawled into a moderately spacious nook in the passage, gasped in cool air and slid my headache against the wall to the opposing wall.

I was wrong. The next question, innocuous and still drying with new ink, read, “Between the destruction of Loa and the extermination of your family, which would you choose?”

Which wasn't a question with an objective answer. And otherwise, the wording was not obligatory. *Would*, it asked, not *should*, which suggested no correct answer. My warm forehead pulsed and I remembered a boy's palms and the scent of flesh rolling over red ceramic tiles like a low spring fog. I wondered if the question was personal to me, or if we were all expected to answer unequivocally. Quip would've chosen Loa, since Sebs rarely knew their lineage, Mon as well, since he was an unchild. We weren't mindless replicas. Sometimes, thinking about Loa's rules and expectations, I could work myself up to a fraction of the anger my teacher held. I could understand why she hated scholars.

Me? How could I answer this question when my family burned? I pictured Rogel and Laisa sitting to either side of me over a breakfast of frost bee honey and snow net. I thought of my Sky General uncle, who was nigh on invincible with his king-green rifle named Moor. I still remembered the spark at the hip of his rifle, reflected in the black wells of his eyes. I always felt my teacher's hands.

In a rush of rebellious anger, I pressed my palm to a panel to my left and shoved hard.

I was momentarily blinded, as I stepped into the first spacious area since I was outside. I let out a groan of relief and rushed in, stretching my arms as wide as I could and standing to my full height. My fingers did not touch either wall, and I'd never realized how the sensation of space could feel. Almost like satisfied scholar's lust. Almost.

“Heh, you just lost me fifty shards against myself, princess,” a familiar voice said.

“Boivi-al!” I exclaimed.

The older woman smiled wearily and leaned back against the wall, carefully holding her deformed wings sideways so they did not cramp. Two lit sun-stones sat by her slack hands. They

were several magnitudes brighter than mine, filling the small room with a clinical white. She beckoned, boneless, to me. Her face was very pale in the lighting.

“My condolences,” I said.

“I thought Mon and Saresen would arrive second,” Boivi-al said. “Where’s Quip?”

“Why do you think I arrived so soon?” I asked. “No burdens.” My voice broke as I joked though. “He... I don’t think he’ll make it. Are you resting?”

“I assume I was waiting for the others,” Boivi-al said. “I have searched, but there is no question to answer in this room, save that.” She pointed a limp finger at the doorway I exited from, which had closed soundlessly behind me. My puzzle piece and one other were taped with small pieces of paper. The papers were scripted, in the elegant hand I assumed belonged to Cieger, with the word “teria chemica” and the word “elyum ensher”.

“Why is the Elyum moon similar to three chemicals?” I asked. The words sat uncomfortably in my ribcage, tickling at intercostals musculature.

“When I came through, that wall only displayed the words elyum moon, and none of the other puzzle pieces can be moved from this side. So I assumed, correctly I believe, that I needed to wait. As more scholars arrive, more of the question will be revealed. I say Mon will come third, should you like to wager against me.”

“What if none of the others make it?” I asked.

“Then isn’t it a situation that much resembles reality?” Boivi-al laughed. “The more scholars gather, the easier a question is answered. So? Wager?”

“Well, far be it for me to wager against partners, but I...” I knew Mon and Saresen. Mon appreciated the artistry of puzzles and Saresen was a creature obsessed with affairs of the mind. Even if they were capable of reaching us the fastest, they would not. “I will wager on the boy, Ueshar. Say, just a shard?”

Neither of us was correct. Over the next faintly audible flap, Miguel, and then Ueshar with Quip, walked into the room. “Quip!” I gave a shout of disbelief and jumped to my feet, untangling myself from conversation and hitting my head on the ceiling. “Bird droppings and spit! How did you get here?”

“Eh?” Quip said lazily. “I moved a few pieces and could crawl through, barely, into the kid’s path.”

“Oh,” I said in a small voice. “I’m sorry, if I’d known, I would’ve waited. I thought you’d failed.”

Ueshar darted from behind Quip and clung onto my waist, burying his face in my sweat-stained pants. I felt a brief flare of self-consciousness, and then awkwardly stroked his head and the pale layer of fuzz there. I glanced from Quip to the boy, and then back to Quip. “Anything happen?”

“We had a few arguments,” Quip said sheepishly. “The kid was right, mostly.”

It took a certain courage, or perhaps stubbornness, to argue with a Seb. I patted Ueshar’s head again, slightly more sympathetic.

When I looked back at the wall, I choked on saliva. Miguel, Quip, and Ueshar’s entrance heralded a list of five answers, each a sequence of three unusual chemical compounds: arshena-ranfron-uhana, arshena-babek-yusine. Upon seeing the combinations, I likely shook as hard as Boivi-al did after a morning without her cigarettes. The air inside Backett Box was suddenly too hot, and I couldn’t breathe through the half-dark. These were chemicals I recognized from my teacher’s notes. Her research in the moonworm was why she was expelled decades ago. I did not think anyone else knew the answer to the question on the wall.

The placement of that question and I in the same room, especially where we could be observed by the public, could not possibly be a coincidence. Was it Loa? Amona? A test? A challenge? A fatal blow?

“If I were you, princess, I would not participate in this question,” Boivi-al said by my ear. My mouth closed with an audible snap. I shivered and stepped away from the Cici woman, who slouched and limped towards the far wall again. My eyes followed her retreating back, and the chill which always accompanied hearing my teacher’s name festered on my face.

“What is this?” Ueshar demanded, gesturing to the half-formed question on the wall.

I explained, but my attention remained on the exhausted Cici woman sitting against the wall, with her sun-stones on the floor beside each of her upturned palms again. She knew who my teacher was.

I untangled myself from Ueshar’s persistent attention after a moment, and approached Boivi-al. Squatting by her side, I peered closely at her pale face, with the faint scars of plucked feathers rising up against her hairlines. Before I could speak, Boivi-al held a hand to her mouth.

“All scholar student have secrets, princess,” she said. “Only damaged children would voluntarily give up twelve percent of their tenbhito cortex in exchange for a piece of metal with a bird face. All the free food and services in the Thumbprint can’t replace lost childhood, and an early death. Milam si Sorenti is the only scholar to ever break the rules of this association and research the moon and everyone knows that. The others think your only secret is that ash pit twenty years ago. You should endeavor to keep it that way.”

“You stole information from the supervisors,” I accused.

“Lisarel Amona is a severe insomniac, and the Corek siblings have loose tongues, and other loose body parts aside, when overspiced,” Boivi-al winked, and then lost her smile. “But in serious, don’t tell anyone.”

“What’s your secret?”

“What is worn openly is not exactly a secret.” Boivi-al gestured to the ruined stumps across her back. “Breeding experiment to regain wings. Failure. Reduced immunity, lifespan, inability to function in Cici cities because of balance problems.”

I breathed out and touched the tip of her right wing, thumb sliding between the exposed bones. “What would you have me do? Should I tell you the correct answer and you can relay it to the others?”

“Oh princess,” Boivi-al grinned. “I’ve no issues against you particularly, but I’d much rather fail this year than be associated to your mentor. I would not want to use any information found by that woman.” Her short wing gave a brief jerk and was pulled from my fingers. “Aren’t you frightened? You’ve made friends here, haven’t you, princess? The young woman with the screaming coin and the youth with ten missing years on his back. What do you expect will happen if you’re revealed as the student of the greatest traitor to our association in the last few decades?”

I pulled my hands back, and stood. The abrupt transformation in her attitude was not unexpected, I told myself. “All I’ve seen of scholarship so far is hypocrisy and bigotry anyway. I expect nothing. And I can’t stay quiet if I’m the only one who knows the answer.”

Boivi-al smiled up at me. “Maybe we’ll find out what happens to the Heintol’s girl today.”

Mon and Saresen, incidentally, were the last to arrive. The puzzle piece flipped outwards, and the passage unfolded to allow the two to step in, bright-eyed and sweaty. For a brief moment, their pupils shrank and they closed their eyes. When they opened them again, I stood before them. The way smiles lifted their faces made my heart beat a little faster. I couldn’t let them know. And I couldn’t let them fail.

“Aren’t you all a little late?” I asked, crossing my arms. I was aware that Boivi-al’s beaded eyes followed me. “You lost Boivi-al a shard.”

“Lost Boivi-al a shard?” Mon echoed, and then his grin grew fierce. “You were betting and you didn’t bet on us?”

“Why would I bet on you slowpokes?” I countered. “Didn’t you stop to inspect the metal and the wood, the set-up and the infrastructure?” Mon met my eyes, but he flushed bright orange and fiddled with his collar. “The scent of it, the feeling of claustrophobia?” I pressed. I glanced at Saresen. “Didn’t you spend whole flaps trying to find out how Don Cieger deciphered the parts of the puzzle he did? Didn’t you pretend to be Backett, or maybe Gai, attempt to draw it in your mind, or mold it with your fingers?”

Saresen laughed and took my elbow. Mon, still flushed, looked around at the others. “We heard Hansil and Tolly fail. They’re not hurt, we think, and we both heard them shout for help. This everyone then?”

“We think so.” I knew Tenma had failed. Miguel and Patral disagreed on answers and ventured separately. Between the two, Miguel was right. And Mon and Saresen brought the knowledge that Tolly and Hansil would never make the final room.

Boivi-al looked at the wall we had all emerged from. The last of the puzzle pieces had flipped, exposing the full choicer question and a list of eight answers, each with a different set of instructions written after it. Since a pair of us did not make it, two of the choicer options – the five and the six – did not reveal itself. Cieger’s smooth script crossed the panels and, with the lightheartedness we could hear in his voice, we read, “The Elyum moon worm shines bright in the sky tonight, and its rays are violet and gentle. Which three chemical components make up its light?” Saresen fell into an almost uncharacteristic silence. She unfolded her silver coin from her pocket. “It looks like this is everyone we can expect, but...”

But the right answer was missing from the list. It was probably what would have been flipped if Hansil and Tolly joined us. I bit my lips. How could I convince the others of an answer which did not exist on the board? I opened my mouth, but closed it again when Boivi-al glanced at me.

“We have to answer this to get out?” Mon frowned. “The eight choices out of ten that we know are arshena-babek-uhana, arshena-ranfron-yusine... How can we answer something that has never been investigated or known by proper scholars? None of us know this spit.”

“Maybe...” Ueshar said. “We can make an educated guess.” He slid to a seated position to my left. He breathed out, rubbing the edge of his coin. Heat radiated from his skin, and I glanced at his deeply flushed face. The fever seemed worse than during the brief conversation with the boy through the broken wall. I felt my pockets, and realized only half my water skin remained in the hot weather. I passed the water to him, and he twisted the lid the wrong way before opening it, letting the warm water lick over his lips and inwards.

“Kid’s right,” Boivi-al said, stepping up to frown at the words. “Can’t be the second, since babak isn’t light enough or magnetized enough to levitate. It could be present in trace amounts, but it can’t be a major component.”

“And yusine is not a levitated compound either,” Miguel added. “Maybe this’ll help.” He gestured to his right. “We can rule out eighth and ninth, since if I’ve the handle of this puzzle correctly, those’ll only lead us deeper into the box.” As he was the one with the map of the blackwoods around the pentagon dormitories during the first exam as well, I’d begun associating him with maps.

“You can tell? That’s all manners of incredible!” Mon exclaimed.

Against the wall, with Saresen standing a hand from me but frowning at the question and Ueshar nearly unconscious, I shook my head. Yusine was a correct compound, but they'd already vanned it out.

"Fourth down?" Mon asked. "Gorel-ranfron-uhana? Uhana does produce a low-spectrum light when reacting with neoxy and carbon."

"Mon, you're not thinking deep enough!"

My outburst surprised the others. Boivi-al sighed with a slump of her vestigial wings. Mon's eyes lingered on mine. "And what's wrong with my guess?" he challenged. "You've been oddly quiet, Kaya? Bit out of your league?"

"Uhana is harshly irradiated," Boivi-al cut in, her voice growing tighter. "There's not so much radiation in moonlight. Can't be fourth."

Mon ignored her. "Kaya, explain yourself. What did you mean?"

"Just because yusine, or babak, I guess, doesn't levitate, doesn't mean it can't be a major component," I said weakly. "What if it's a missing answer?"

"We don't have the instructions for them, so we really can't use them," Saresen said thoughtfully.

Miguel had remained in the backdrop as the other scholars debated moonlight. Now, he raised a hand and cleared his throat. "All buildings," he said hesitantly. "All paraboxes, even the Backett Box, are composed of fundamental elements of infrastructure. There are exactly ten viable options in this room that will not harm the structure of the current puzzle. I'll bet there are penalties involved in moving any of the forty-six other options here. I know which two other puzzle pieces are associated with the answers. One's impossible, actually. It'll lead us back into the puzzle."

"That's Miguel the lineprint maniac!" Mon crowed.

“Also, we’re currently picking a most suitable answer, a best fit, instead of a formulating a working hypothesis,” Boivi-al said. “We’ve never been so high in the sky. We can’t assume gravity or elements work the same way once we leave the basic layers of the atmosphere.”

“What do you suggest, then?” Saresen asked.

“Elyum is the cycle of moonrise, when the old cocoon of the moon would be eaten by the new worm. The silk cocoon would have remained in the sky for most of the year before that, and its light steadily dims,” Boivi-al said.

Saresen nodded. “So we can use the half-lives and disintegration rates of each of these substances as clues. What can make moonlight dim over the course of a year?” She paused to clap me over the shoulder. “Mon’s right. You’re really oddly quiet right now, Kaya.”

“No, no! That’s...” While everyone was preoccupied with the question, Boivi-al watched my shoulders suddenly curl inwards. My voice withdrew back into my throat. “That’s not it at all.”

“Ranfron,” Boivi-al said. “I think ranfron’s a component. It isn’t in itself luminary, but it has a half-life of sixty days, and Mon can check my roughs, but from the estimated mass of moon silks and the candescent index of ranfron, it should produce the dimming effect we desire in the moon.”

And though the others continued to glance at me, occasionally inquiring after my thoughts, Saresen’s half-hearted comment froze my mind. I gave stammering, unconvincing directions, and I could blame none of them when my suggestions were not taken. I could not speak up as Mon and Boivi-al and the others came to the perfectly logical conclusion of the second answer. I was watching the light on Mon’s face, and the furry ears drawn back on either side of Saresen’s. Ueshar’s labored breathing sounded in my ears. Quip’s grin showed a faint hint of fang as he reached for the eel-like puzzle piece in the floor.

I couldn’t tell them, but I couldn’t let them fail either.

Before Quip could pull the thing, I said around what felt like a goose-egg goiter in my throat, “Don’t touch that, Quip. The answer’s antigone-ranfron-yusine, one of the missing answers.”

Quip paused. I couldn’t meet anyone’s eyes. Boivi-al slowly closed her mouth and eyes and sagged against a spear of puzzle pieces.

“You didn’t speak up before,” Saresen said.

“It’s one of the missing answers,” I repeated.

“How can you possibly know that?” Mon asked, a small grin rising on his face.

“Nobody’s ever investigated the moon worm. So you must’ve cheated.”

“It’s a missing answer. Trust me.”

“But nobody’s ever... except...” Mon’s voice trailed off.

The thought occurred to everyone simultaneously. The scholar students ruptured into noise. Ueshar sank against the far wall, reaching a hand up to pinch his nose, probably so he would not cry. Quip touched a wall with his right hand before pulling it back to his side. Mon’s face looked vaguely purple.

Saresen barked a Cae word which could have meant silence or stillness. It had none of the flair and importance of a non-speaker who knew occasional words, and used them for self protection or showing off. It dawned on me then, that the hound-like woman with whom I had been spending my days, who was not as good a scholar as Mon, spoke a language in which one could alter the world around us. In the aftermath of Saresen’s word, though, no one spoke or moved.

Finally, Saresen said in a voice like the vibrating air around us, “Putting our trust issues aside, Miguel, which puzzle pieces are associated with the missing answers and in your specialized opinion, which would be the one to pull?”

I'd once felt valued by this group, as if anything I said with such confidence would've been trusted, but no longer. Not if they suspected I was affiliated with my teacher. I held my tongue. Miguel, a deep frown etched between his eyebrows, gave a gesture with both hands.

"Quip, do it," Saresen ordered.

Quip's eyes were on me as he reached for the hourglass-shaped puzzle piece.

A deep groan of wood against wood ruptured against our feet. We could feel the vibrations through the rugs, streaking up our legs. Boivi-al gave a shout as her legs rattled, and she fell backwards, narrowly missing a protruding puzzle piece, and sprawled across the floor. Her pants rode up, exposing great mechanical bird claws where pads and toes should have been. We held ourselves still and listened as the groan of metal and wood died. Looking around, all the scholar students gave shouts as the room split in two and opened.

I half expected Sun light to blind me, but only the faint evening glow, accompanied by a cool northern breeze, swept into the room. The light illuminated the sweat stains down all the students' backs and under their arms.

"I heard someone speak Cae inside," Cieger tipped off his hat and polished the rim. A children's picture book was bookmarked by his hand. "I must wonder what will the rest of you do when you don't have a Cae speaker ready to take charge?"

Through Cieger's comment, I could only stare at Mon's dark eyes. To one side, Saresen's face was carefully guarded. Tension cut into my smile. Mon's braids resembled snakes when he was angry, especially backlit by the red of the dusk.

Mon took a step closer to me. "What in the Thumbprint is this, Kaya? The three basic chemical composition of the moon worm's silk? That's yet to be discovered!" He turned his gaze over my face, and an anger I'd not seen in the youth before crept up his neck and onto his face,

pulling back the muscles around his eyes and lips. His voice was venom. “Kaya, there’s only one scholar who’d ever stolen the moon to study. She caused the Black Five. Milam si Sorenti.”

I swallowed.

“You lying wretch!” Mon growled.

Saresen stepped up beside him. “Kaya, how are you related to former scholar Milam si Sorenti?” she asked stiffly.

I bit my bottom lip and replied with, “Where do the rays go?”

“That was *not* a rhetorical question! You didn’t think to mention that your teacher was a fell bird and a Heintol?” Mon whispered, his face smoked with rage and hatred. Even through his wrath, though, Mon kept his sarcasm. “I mean, right. I’m sorry for being overly sensitive. Your teacher was only exiled for illegal story chasing and causing the Black Five, only melted down a fake scholar’s coin, took forbidden knowledge with her, and only published a book that could’ve potentially destroyed the whole Thumbprint. I’m obviously overreacting.”

“Just because scholars are not allowed to research deities like the moon, doesn’t mean we should live without knowing,” I said quietly. “And it’s always been the sole privilege of licensed scholars and this association to determine how knowledge should be distributed. Who decided that?”

“Has anything good happened since your teacher published her little compendium?” Mon demanded. “Or have the fish people committed the genocide of eight thousand infants while looking for the reincarnated pieces of their deity that your teacher’s publication told them about? Have the Hali killed and imprisoned two dozen licensed scholars and barred all entry into their kingship once they found out we were capable of reading their mental scriptures? Are Kiin and Moland on the brink of war over the spice corpse in the Gut?”

And to those accusations, I could say nothing.

Mon seemed to wait for my reply. When none came, he spat hard into my face. I restrained myself from wiping it away.

“You spat on the student boogey Milam si Sorenti took around. Are you satisfied?” I asked numbly.

“No,” Mon said. His voice broke. He might’ve considered it sufficient warning, but I was caught off guard when he charged at me, heavy golden body ramming into my belly. The shock surged up my gut, and I fell backwards into the puzzle floor, the wooden pieces burning down my back. My hands flew up to guard my face, but Mon did not immediately hit me, merely dug his bony knees into my hips.

“Mon, you rat-broken–” I lowered my hands to see that rage was still vibrant between his braided hair. That was when he chose to hit me, a heavy strike in my left cheek, with the side of my arm catching the edge of the blow. My qi flared in response to the strike, and my sleeves filled with steam. Mon drew his fist back, red-eyed, and blisters rising along his knuckles. Despite the burns, he brought his other balled fist down, and I accidentally bit through my gums. The scent of burnt flesh filled my nose. I gasped, allowing two more strikes to my face before reaching for the pistol at my side.

“You spit! You wretched little liar!”

“Mon!”

“We trusted you! We nearly told you!”

“Mon, stop it!” I snarled.

Mon froze when he felt the tip of my pistol against his waist. I could hardly recognize his face, twisted and more teeth than mouth. “People like you should be the ones with their hands removed and torn limb from limb,” he hissed. Tears wrinkled down from his eyes.

He lifted off my chest, burnt hands clutched at his side, and delivered a solid kick to my side. I covered my face with one hand, the other still wrapped around my pistol, and felt nothing except the pain in my face. I heard instead of saw Mon storm out of Backett Box. His steps echoed up the metal riggings. The ladder clang as he descended.

On the floor of the parabox, I wondered if Mon's anger had anything to do with the ten missing years from the tattoos on his back.

A hand was offered to me. Saresen pulled me upright and touched the inside of my arm with a soft green handkerchief. I turned to her, blinking through both swollen eyes. I could not open my right, and my left watered when I squinted. I looked for some degree of absolution in Saresen's face, but while her gaze into mine was even and responsible, her words were not. "I'm afraid, Rim Kaya," she said, "there are things which cannot be overlooked. Will you be alright by yourself on the research story?"

I folded her handkerchief and handed it back to her, and then wiped my mouth and face with my sleeve. I swallowed the films of blood in my saliva. "I'll manage," I said. "Thank you for your hard work."

The short girl abrupted a very forceful breath, and Fiel the lanternfly dropped from the sky to flutter against her dark hair. Her eyes passed over me like a wind, and she arched her wrist to cup at her chest, mimicking tail-gestures her Cae ancestors would've sported. She followed Mon.

The other scholars stood in a stunned circle. Ueshar took a half step towards me, expression as if he had been betrayed. "Your teacher was Milam si Sorenti?"

I didn't answer him. I sheathed my pistol and climbed out of the puzzle with as much dignity as I could. The other scholar students followed, voices rising. Quip darted before them,

and I caught a glimpse of his red skin from the corner of my eyes. “Leave the girl be, bigots. Not all of us can help our relations.”

I could not even conjure gratitude. My mouth was still bleeding, and my legs shook with the qi loss. My eyes could barely follow the geometric pathway down the ladder.

I still could not ride dragonflies well, but Mon refused to take a bird with me. I could see the same reluctance in the other scholar students’ eyes, so I held my head high and called for a dragonfly while Cieger scratched his head and wondered what had happened to his charges. I wondered if he included the question of the moon on purpose.

I managed to cling on to the dragonfly most of the ways back to the pentagon dormitories, but fell off just outside Dalton Thirty-two. I walked through the mud and darkness until my socks were soaked through, and arrived long after the Sun flapped past our horizons for the north. I removed my socks and left them under the albatross statue. The canteen was closed except for the crusts of stray bread. I thought briefly of my motorcycle and packs in the shared bunk as I ate, dipping the bread into cold milk in an end seat of the dark canteen.

When I finally worked up the courage to return to the bunks, I found my motorcycle and pack placed neatly outside the room. Lisarel Amona, ever the insomniac, watched as I took inventory of my items. I held my head as high as I could and answered no questions as I shouldered my pack and wheeled my motorcycle into an adjacent empty room.

“You know I did you a favor,” Amona laughed at my retreating back. “Always better to be truthful with your fellows.”

Excerpted from *The Beginnings and Whereabouts of All Things* by Milam si Sorenti

...Loa

Despite the territories they occupy and their presence in the Thumbprint, Loa cannot be considered a kingship. (dc. Dice, 1339) They are an alliance of three separate organizations with similar origins and ideology, each represented by a guardian deity. Knowledge between all three organizations is readily shared. Most agree that the organizations were originally created by an alliance of these three deities upon the floating Loai islands. The goal of Loa is, and has always been, the acquisition and monopoly of knowledge for the sake of knowledge. Their methods are described by many as ruthless. (dc. Sorenti, 2062)

Among the three, the most notorious is the Loai Scholar's Association, governed by the Albatross. Between none and ten scholars are accepted into the association each year, after rigorous intellectual, psychological, and physical challenges. In their chase for stories, scholars readily interact with the outside world, inevitably becoming Loai ambassadors. (dc. Sorenti, 2062)

The Whistling Tree, descended from the dead Atirel and Lahmu of Cae, watches over the governing body of Loa, studying the Cae language, generating inventions, theories, and other knowledge which must be created instead of discovered. The Albatross makes its home in the branches of the Whistling Tree.

The last component of Loa is led by the the great winged serpent twined around the roots of the Whistling Tree. The members of this association, commonly referred to as the kulkan, are responsible for the protection of other Loai members and their secrets, through the use of memory temperance, miscommunication, networking, Cae, and very occasionally, physical force. (dc. Sorenti, 2042)

Beginnings and Whereabouts

Year 2069, Ogum 50

One night I woke with a profound terror. The room was quiet above my shaking respiration.

“Hello?” I called, stupidly. “Is anyone here?” When no one answered me, I lit my sunstone and dragged my protesting motorcycle onto the bed. The vehicle lay on its side, sputtering awkwardly through its ventral exhaust pipes. I wedged myself between the warm, embarrassed breathing of my motorcycle and the cold of the wall, wrapping the thin sheet tightly around myself.

When I closed my eyes, I could almost imagine that it was my teacher curled against my back, that we were on the dirt roads between two kingships, on our way to some new story that caught her interest.

Year 2069, Ogum 51

I spent the next few days frantically researching and redoing Mon’s calculations. I read through the drafts Saresen and I had drawn together, and extrapolated my own insights. Our opinions, unfortunately, were so tightly tangled that I could not pull mine out whole. What emerged was wounded and skeletal, and slender on the pages before me. When I finished, I had a rough ten pages of notes. I pressed the left margin into a seal of plastic, flexing the pages until the plastic seeped deep between the crevices. Less than ten days to write a story worth nine-hundred-thirty-seven-o-five. I wondered if I had that much confidence.

I’d just finished a preliminary copy, only twenty-two pages, with more sensationalization than scholarly content and prose that made me scowl, when a knock came at my bunk room door. Briefly, I considered not answering, but when the knock came again, I dropped my report and

nursed the ache along my hips. I'd been sitting still for several flaps, only pausing for brief moments of stretches and quiet puffs into my teacher's harmonica.

Saresen stood outside the door, dressed simply in a white longcloth which looped up around her throat. Her ears were pulled back and her dark hair unbraided.

"Saresen!" I took a step back, exposing the threshold. "What are you doing here?"

Saresen placed one hand on my doorknob and stepped inwards. "I would like to ask for my tactem set back."

"Oh. Of course." I glanced back at my neatly packed luggage, leaning like a broken tower on my softly snoring motorcycle. "Give me a moment. I should return Mon's Micken parabox as well. Let me find them."

"You misunderstand," Saresen said. "I would like to play, and you will put the set as gambit. For my part, I will bet this." She held up a small black cloth envelope, with white string looping the opening. It swung as if heavy, and Saresen quickly tucked the envelope into the pale fabric bunched at her hips. She stepped into the room, and I was forced to back away. She closed the door behind her and looked as if she wanted to comment on the dim sun-stone on my table. She reached towards it and stroked it brighter, until its light filled the room. Stepping over my packs to the tall windows, she pulled the curtains open and bound the whole mass in a simple knot. She waited by the window and watched the rain outside.

Snapping out of my daze, I quickly reached for my pack and dug into the third pocket for the small rolled tactem set there.

"I want you to forgive Mon," Saresen said quietly as I unrolled the set on the carpeted floor and divided the dark pieces in half. "He has reason to hate your teacher."

“It wasn’t my teacher’s intent to hurt anyone when she wrote that book,” I said. I covered my pieces with both palms until the silk wound around the pieces changed to the color of healthy kaya. Saresen did the same, and hers turned a dark rusty red once more.

“But she knew people would be hurt, so that is a tenuous argument,” Sarsen said. I could not read her voice. “She knew she would sow chaos, endanger relicts and scholars. She knew that our best protection was information, even with the ku kulkan’s watch. Even if she was thrown out of Loa and held a grudge, she should’ve surrendered her coin and submitted to our rules.”

“Is it already ‘our’ rules?” I asked. “You might not pass. And if you do, perhaps I will too. Perhaps we’re on the same side.”

“I hope not.”

Saresen rolled the silver dice, which twirled for a moment and came to a stop. It announced in a bored, mechanical voice, “Carpentia Fields, fifteen-seventy-three.”

“That’s going back a ways,” I said. “Cavalry and arrows and minimal gunpowder.” I rolled the dice again and it announced my proportions. I split my tactem pieces into six groups. “Do I have the higher gambit?”

Saresen rolled and divided her units as well behind the cover of the end of her sash, hidden from me. “I do. Query.”

“Saresen, why are you here?” I wondered if I should lose. Saresen was a fiercely independent woman, and I wondered if she’d prefer the real game or her bids.

Perhaps it was because she had lost to me multiple times, but Saresen paid far more attention to the initial moves I made, and I could tell her inquiries were aimed in my direction from the glares under her thick eyelids. I set my infantry to dig pot-holes under the watchful eyes of my horsemen and assembled double-headed ballistas with chains between the bolts, at least until Saresen queried and found out my intentions.

“Mon was a ghost in Hal, an unchild, one of those who simply did not register in the minds of Hali hive leaders, and subsequently did not exist,” Saresen said. “I’ll query. It was perhaps the worse and best situation for a street child, he said. You were never given words or contact, but you could steal basic necessities without fear of consequences. When Mon was eleven, he met an elder scholar.”

After hearing of my initial moves, I could see the changes in Saresen’s face. I knew, without inquiries, that Saresen would spend at least four rounds exchanging equipment. “Mon told me this story. He claimed he could memorize the Renewal era poems and reflect after hearing it once. And then the scholar found Mon could accomplish complex calculations without the use of stones or integrations. Something I’ve never seen anyone else do.”

I rained tar and gasoline into her midst and set them on fire. Saresen did not even act surprised. When she spoke, her eyes remained on her units, dark carapace pieces turned as red as her silk markings to simulate flame.

“Since the old scholar was in the process of an in depth analysis of Hali mental scripts, he stayed in the kingship and they worked in tandem for several years. The scholar made it clear that he wanted Mon for a student. Mon doesn’t talk about it much, but I think the scholar was quite excited to have found a child of such caliber. That is, until Milam si Sorenti published *The Beginnings and Whereabouts of All Things*, in the most serious information exposure in all the millennia Loa has existed. The Hali found out that we knew their scripts, and correctly guessed the scholar’s purpose in their kingship. They torched the scholar’s live-inn. The scholar managed to usher Mon safely out of the doors before submitting to capture. The Hali cut off the scholar’s old hands so he could not attack back, and his tongue so he could not curse them in Cae. Mon escaped because even then, he did not register in the perception of his fellow Sebs. He arrived

here, and he would never tell me what might've happened to that scholar, though I know the Hali tend to very little mercy and an abundance of cruelty.”

Saresen gave one last desperate charge with her remaining units, turning them in a corkscrew formation, penetrating deep within my lines. This was an acceptable loss, and so I allowed her entry, pulling my own units back before circling around and herding her cavalry towards the pot holes. While Saresen was preoccupied with terrain, I destroyed her.

The young woman sat back and stared at the map. There was still no emotion in her voice. “I met Mon because that scholar was my father. I was not a scholar student then, but training in Cae under the Tree. But Mon was... so distressed, so guilty about taking him away from me, I feared the worst, so I dropped my training and aimed to be a scholar as well. My father was the reason Mon never took a scholar teacher, though many coveted him.”

Which was why Mon said Saresen wasn't raised right, why she was not so affected by the loss of her coin. It wasn't practice, like me. It was because her upbringing as scholar began late.

“But Loa has a strict policy of intolerance towards violence aimed at their scholars. Your father... would've had all the protection of the ku kulkan, and of an association with information to blackmail deities.” I stopped her hands from wrapping up the tactem set. My eyes ached, and my lips turned downwards. Saresen's impassive face made me want to cry.

Saresen flung my hands away. It was done without violence, but a firm, dismissive gesture that confirmed my fears. She felt the same way towards me that Mon did. “Loa weighed the military and authoritative power of Hal against its own. They told me that if it was any other kingship, they would move, but conflict with Hal would cripple us, and we would lose. Instead, they erased knowledge of this incident, and hid the deaths and captivity of a dozen other scholars in Hal. Neither Mon nor I remember my father's name.” She rolled up the tactem set and set it closer to me, and then withdrew the small cloth envelope from her longcloths.

“They allowed us to keep three things,” she said. “We have our qualitative memories and love for my father, his assets and research, and one item Mon managed to sneak out of Hal so my father could not give information to the Hali. I got to keep this.”

Within the cloth envelope was a silver coin on a chain, still warm to the touch, but limp and heavy against my palm. The bust showed a stern-faced man with thick eyebrows and furred ears.

“My father is alive. Though deprived of his coin, he is a little more than a corpse by now,” Saresen said. “He is not able to dream or reason or speak. He would not know me as his daughter, nor Mon as the student he loved. I suspect he is kept alive only for pain, and at least once every cycle, this coin screams. I keep it with me because every night, I pray I’ll wake up and find the coin cold, and through this I’ll know they showed my father mercy.”

“Saresen, I didn’t know.” The tears came then, because Saresen’s wouldn’t. And my voice broke because Saresen’s didn’t.

“You do know. You may not have known it happened to Mon and I, but you know what happened in those days before they silenced the publication, how many people died and suffered in the years afterwards.” Saresen stood and smoothed down her longcloth. “You realize, Rim Kaya, that you want to enter an organization where ten-part-hundredths of us lost loved ones because of your teacher, and the rest probably experienced hardships. You realize that even if you pass the exam, you will never be welcomed.”

I knelt on the floor, with the tactem set before my knees and the disgustingly warm, unfamiliar coin in my hands, as Saresen unlocked my door and stepped out.

“So forgive Mon,” she called back. “Forgive him and you may use my research notes in your story.”

Year 2069, Ogum 56

I finished my story three days before the last exam and submitted it to Cieger instead of Amona, because the man smiled at me once.

The day of the final exam, I washed, rubbing chlorine into my skin and hair, skirting around my eyes, and dressed in my cleanest shirt and pants. My hair was lengthening sneakily without my notice, and curving a little at the ends from the humidity. I knew none of my relatives had anything but straight hair and the men had a tendency to bald, so the curl was unusual. After clean-up, I clutched my coin and meandered into the central space.

Conversation abruptly stopped as I entered. Only Quip looked up to acknowledge me, and Ueshar gave the floor an unreasonably angry glare. Boivi-al stood to one side, looking even more jaundiced than she usually did, breathing in short, shallow pants. The others, Mon and Saresen included, bowed their heads and pretended to be engrossed in the vid panel flashing news in the far corner. I caught an ear of disappearances and conspiracies, and a steady commentary in the stiff, formal Kiin.

I sat in one of the chairs against a bookshelf, finger propped in my soggy light reading, and wondered if I should speak up, announce my presence to Dan Amona and plead for my examination results.

Instead, I leaned against the chair back, fixed my face in an almost-smile that hopefully looked less strained than it felt, and watched the vid screen the other students had gathered around. The pale colors there, the digitally removed faces, the silks, the dark hair and that woman's voice announcing in monotonously perfect Kiin. A brisk voice in Ha spoke over the woman's, relaying the story in a double layer of audios.

I blinked when I heard a familiar name.

Lo An-tar. Missing.

“No...” I whispered. “He couldn’t possibly have...”

Lo An-tar, River General and third-ranked of Kiin’s expansive and widely-feared army of eunuchs and women and men. Lo An-tar: the prodigy born into an ashline so highly ranked he was a pearl spat into his mother’s hands. He’d eaten more ashes than most Kiin ate salt, spent longer on bird-back than most Kiin his age had walked. If he was missing, it was obviously an internal affair. He’d probably offended the Emperor, as many tended to do.

Lo An-tar had held me on the roofs of the imperial palace with his seven-year-old hands when my parents turned to ash and warned me not to look away. That boy was missing. No, the bold, unfamiliar youth he’d grown into was missing. I could not reconcile the two images. I pressed a shaking hand to my mouth and took it as an omen. I pulled my short hair over my eyes and bowed my head.

And then, just once, I saw Mon twist his head to look in my direction. It had obviously occurred to him that after Tenma’s failure, I was the only Kiin from whom he could obtain inside information. Our eyes met, and for a moment his curiosity was greater than his hatred. He did not ask though, and soon turned back towards the screen, speculating loudly to Saresen and the others. “This must be a trim,” he said. “I mean, they’re not Sebs, but high ashline Kiin are bird-droppingly difficult to kill. Kid like him would’ve left a few corpses in his wake unless the kingship was covering for the murderers.”

I closed my eyes when the other students were invited out to meet their supervisors. They were louder under stress, and with only six of them remaining on the brink of the last exam until they were licensed scholars, their chatter deafened.

I imagined my teacher as she must’ve looked as a licensed scholar, before exile colored shadows under her eyes. She would’ve dressed in the same blue and silver that Amona and Cieger did. She would’ve leaned heavily against the walls of the pentagon, wiggling her fingers

in the orange-stained light from above, and pretended not to see me until I took her hand. She would've been my supervisor as well as my teacher.

I wondered what Techatumai looked like, where he was, and whether the occasional friendly letters he sent to my teacher meant he would've accepted me if my teacher was not exiled. I thought again of the boy's hands with dark rivers across them.

Only Quip paused before my chair. "Seems your fate and Lo River General's may correlate," he said. Something in his expression was tense. His clawed hands twitched. "Stroke of luck for you. Well, speed."

Before I could ask what the Seb meant, he'd joined the huddle of other scholar students.

After the others left, Amona sat in the chair next to mine and handed me a pale cloth folder. I dangled it between my fingers for a moment, swinging it by one corner, and worried my bottom lip. The papers grew steadily heavier in my grasp, until I needed both shaking hands to hold it still. Amona was a quiet figure by my side, but I didn't dare look at her, because her expression would have told me my fate as surely as the papers in my hands.

I couldn't look, because despite the odds, I might've passed. Even if Lo An-tar was missing, it did not mean my failure was guaranteed.

My coin, however, wasn't afraid. It rolled over the ridge of the envelope, slipping between the cloth covering to the papers underneath. When it tipped off the edge, I gave a long breath, straightened my shoulders, and opened the folder a sliver.

"You don't look very surprised," Amona said. Her smile was wide and glowed in her gaunt face. She had always held her shoulders in such a way she appeared taller than the others, but at that moment, she looked immense as well; her skinny arms were the branches of an elephant tree and her protruded cheeks were ridges of a mountain.

I looked up when I spoke. “I’m not. I will sit for a moment longer, and then I will go pack.”

“I will personally guarantee your safe departure from Albatross Landing,” Amona said. “You will not be harassed on your way back to wherever you wish.” She paused. “And you were so close too, Rim. Impressively close. If I didn’t know better...”

“Why do you look so happy?” I interrupted. The cloth folder rested heavy in my lap, like metal bars a patient would wear to keep themselves still.

My question took the woman off guard. “Well, I suppose it’s the joy of triumphing over evil,” Amona answered, grin turning downwards at the corners until it was more a leer than a smile.

“No, yours is the perversion of triumph,” I said. When Amona glanced at me, I elaborated. My voice grew shakier as I spoke. “Flankin’s seventh. A celebration of triumph is at once a celebration of poor character, because triumph is contingent on the failure of those less fortunate. You are so convinced that Milam si Sorenti is wrong, evil, and that I am her mitosis, you’re celebrating that a student just failed your exams despite having the capabilities. I’ve spent every day of twenty years hoping to pass this exam, to be just like you. I suffered scholar’s lust as you do, I submitted to a doctor I didn’t know and he split my brain open, stole part of it, and melted it into a silver coin. I’d worked as hard as Saresen and Mon and Quip and Ueshar and Miguel and Boivi-al, and you realize that as well. Your results showed I would’ve passed, if you didn’t hate me, if I wasn’t Milam si Sorenti’s.”

Amona laughed. “Why you blind little child, that’s the way it works. Who we become depends entirely on who we know. Hundreds of men and women in the Thumbprint would pass the exams and become brilliant scholars every year if they just had the access to the same education you did, if they had scholar teachers. The reason there are less than five thousand of us

is because of whimsical coincidences. It would be just like Sorenti's spawn to complain without logicking through."

I pulled in a long breath and wiped at my eyes. "You're right. Thank you for your wisdom, Dan Amona. I would... like to return to my bunk now."

At the door, I turned and couldn't breathe through the tears. "You said I was close... but I... I wasn't... I wasn't really, was I? I didn't even manage to break ninety. Not on any of the tests."

Amona grinned. "If you'd feel better, the highest scoring student so far is Boivi-al, and she didn't manage the nine-thirty-seven-o-five either. Don't worry. No one ever expected you to succeed."

By the end of the night, I lurked next to the pentagon entrance and saw that only Mon, Saresen, Quip, and Boivi-al returned. I tried to comfort myself that out of hundreds of applicants, not many ever passed. Four remained, and they had not yet handed in their stories for the final component of the exam.

They spotted me, with my pack in hand and motorcycle leaning into my hips. Boivi-al and Saresen quickly dropped their gaze and pushed past the door. Mon stared, and the emotion in his face was ugly, though I could not tell if it was still hatred and anger, or if there was anything else there. Quip's face showed his disappointment clearly, and he ambled up to me.

"You're really out then? Leaving tonight?"

"Probably on the same ship as Ueshar and Miguel," I said.

"Pity," Quip said. "The fish man was a little too effeminate. He made me nervous. I liked the kid well enough." He held out his hand. "Good luck."

"Thank you."

“And really, it’s a miracle the Hali and the half-Cae passed today,” Quip shrugged. “They were very distracted. They wanted to come and ask if you were leaving too.”

I thought of Mon and Saresen, colored like the Sunbird and the dark Elyum moon.

“No they didn’t,” I said, smiling a little. I gestured to my luggage. “That’s a ‘where do the rays go’ sort of a question, and Saresen and Mon are too practical to ask something like that. I hope you pass, Quip. All of you.”

“I don’t know you well enough, Rim Kaya,” Quip scratched his head. “However, if you ever find enough lenience in the system to take this exam again, we can socialize further. I’ll even write your reference letter once I know you better.”

I walked to the docks at Dalton three. There was too much humidity in the air for dragonflies to fly properly, so a glass stall on a pulley chain would lower my motorcycle and luggage down.

Amona waited there. She greeted me with a wide grin and a nod. I supposed both Ueshar and Miguel were already below on the ship, and perhaps a different scholar supervisor would see us out of Loa. I unshouldered my pack and let it drop in the damp ground. The plastic bottom of the pack sat in the puddles.

“Have a good life, Rim,” Amona said.

“You too, Dan Amona,” I said. I reached for the sliding door of the glass stall. I wheeled my sleepy motorcycle inside and then dragged my pack in. The mud left a trail on the glass floor below.

Before I closed the glass door, Amona spoke with a raised eyebrow. “I don’t suppose you’d be a dear child and tell me the location of your manuscript?”

I thought of Mon's anger and Saresen's carefully blanked expression. I wondered how I'd feel if my teacher's coin screamed once every cycle. I lifted my coin over my head and presented it to her with both hands.

Amona smiled at me and my offered coin, and waited for an explanation.

"This is *The Beginnings and Whereabouts of All Things*," I said. "I'm sorry I deceived you. There was never any manuscript except the one in my memory. I could recite and write out all eighty-nine-sixty-one pages. That was what I really meant. If I was silenced, your secrets would be safe."

"A very abrupt change of heart, Rim," Amona observed. "Are you so depressed by your failure?"

"Saresen said something." I said.

"And you would never make the same mistake your teacher did," Amona said with more confidence than I felt, with the bitter taste of eight-seventy and Lo An-tar and my dead teacher thick in my throat. "You would never have published the information. There's not enough anger in you, and you love the Thumbprint too much. That much was obvious from your actions. Giving me your coin would be redundancy, and if I'm honest, a waste."

"If you were so sure of that and still hated me, you're a hypocrite. Well, maybe I'm my teacher's student, and I'm playing you all." I bared my teeth. "Go on, take it! Shouldn't you be completely fine with that? Go!"

Amona retrieved a small bottle of water from her pocket and sipped at it. "Incidentally, Techatumai agreed to my proposal."

"Liar!" I snapped, without processing her words. She waited with a smile until I shook my head and said, "I'm not sure what you mean."

Amona finished her water before continuing. By the time she finished, I was weak with restrained impatience. My knees shook and I leaned heavily against my motorcycle. "I've decided," Amona said, "you are serious enough. You will still require two references. However, in light of your performance so far in the examinations, we have decided to grant you mercy under the ninth article of examination overrules. These references no longer have to be scholars, as long as they have an acceptable repute with Loa."

"But you hate me!" I burst out, jumping out of the glass stall. I hadn't heard my heartbeat for several days, but the distinctive double-tapping pressure against my ribs was unmistakable.

"Whatever gave you that impression?" Amona asked, but she was grinning. "Senior scholar Techatumai could not come and suggested we simply exempt you from the final exam, but he is a little soft, and he realizes it himself. Thus, he accepted my alternative proposal for your examinations. You will first fail before you are allowed to continue. See, Loa has no records about you, nothing to indicate your motives, the risk you would pose as a scholar. I believe you are harmless, but I cannot justify an opinion based on gut and initiative, can I?"

I shook my head.

"So now I've proven you are not... how did you put it? Sorenti's mitosis. How it was, that's the way it was. Your examination will continue. My new conditions are a sliver easier than a seven-fifty cumulated average when you're only taken four tests."

"If I tried harder, maybe something would've been different!" I said. "I just didn't try enough. I was too preoccupied with keeping a secret, pleasing everyone..."

"Tell me the names of your references, Rim." Amona said, amused.

I hadn't time to think. "Would Rogel si Sorenti be acceptable, then? He's published a short pamphlet on linguistics and holds some repute as a translator. I can send him a request."

Amona tapped the name against her temple. Her hands were frail and older than she was, looped with stone rings. “And the other?”

I stayed silent until the woman looked up at me from beneath the thick, round rims of her spectacles. It wasn't until she began tapping an impatient drum beat on her leg that I said, “I still have a living uncle in Kiin. Rim Nin, former Sky General of Kiin. He was involved in the Skirmish at the Gut, and in Yellowtail. He can give an accurate account of my character as a child, from which you could extrapolate. But I have no access to him.”

“I'm still not your sitter, Rim,” Amona said, annoyed. “It seems every time I give a step, you take two. Your uncle is an acceptable reference. I suggest you find him and request that letter. And then, you will find senior scholar Techatumai, fall to your knees and tell him you'd bed him if he passes you. And then perhaps he will conduct and score the final, supervised component of your exam. If you pass that, Techatumai will fill the eyes of your coin and you may return here this time next year to receive recognition.”

“Two references,” I echoed. I fisted my hands in my clean shirt, wrinkling the hems. “Dan Amona... my uncle is in Kiin. It's not a matter of difficulty or lack of effort. I'm not allowed back there. They'd arrest me on sight if they found me.” I breathed out. “I'd thought that if I passed and gained the immunity of a licensed scholar, I could go back and at least see if my uncle was doing well. If I could've gone back, I would've a long time ago.”

“Is there no one else then?”

I shook my head. The situation felt vaguely familiar.

Amona sighed and reached into a pocket of her sleek scholar uniform. She took the coin still laid across my palm, and dotted the single eye of the albatross emblem on the coin back with a red, flinty chalk. Something seemed to change about the coin in that moment, and I swore the

silver hummed a tune against my skin. When I touched the red Albatross eye, the red material did not come off.

“It is a matter of difficulty and effort, Rim,” Amona said, “because from the moment you step off Albatross Landing, you will be considered a probationary scholar. I will have you know, that this was not my idea,” she lied. “And it is entirely legal. As it turns out, we are allowed to grant you Loai protection for a while.”

“Go on then,” she said, gesturing to the glass stall. “Go find your uncle, and I hope I won’t have to see Rim Kaya the scholar student again.”

“You won’t,” I promised. And I hoped, fervently, that the promise would shape my mind and being as the Kiin believe. Impulsively, I grabbed her hand and kissed her thumb.

“Now you’re making my blush,” Amona pulled her hand back and crossed her arms across her chest. “You are really not my favorite student. Go chase your stories, bird.”