

Capítulo 12

DE LOS MINERALES DE ORO, PLATA Y OTROS METALES, PIEDRAS PRECIOSAS, COLORES, TINTAS Y OTRAS COSAS DE VALOR

Non trato aquí de las minas que se labran en la isla de Manila, en la costa que mira a los mares de Nueva España, en los montes llamados de *Paracali*,¹ que, aunque pertenecen a los indios [de] Bisayas, pues llegan hasta allá, y algo más adelante, por estar² lejos de estas otras de los Bisayas, de que trato en especial, y tener sólo las noticias (aunque son muy públicas y sonadas) de oídas, en que se suelen engañar algunos con facilidad por creerlo todo, sólo diré en general lo que he oído cuando estaba en la costa de Ibabao, o Palapag, que está más al Sur, dos grados poco más a menos apartada de Paracali. Y es que dicen [que]³ se halla mucho oro y bueno (sin el hierro, que no es poco el que se sacá siempre), plata azófar y aun otro metal que poco ha se halló, que parece oro y no lo es, aunque excede al latón, o azófar más subido, y no sé como lo han llamado, pues no parece que es el *auricalco*⁴, tan nombrado antiguamente.

Vengo a lo de estas islas de Bisayas donde la mayor cantidad de oro se saca de los ríos, o arroyos, que llaman lavaderos, porque, lavándolo en bateas u otros vasos, lo apartan de las arenas y tierra. El lavadero de la Isla de Masbate⁵ ha sido siempre célebre por acá, y la falta de quien lo beneficie (por ser pocos los indios que han quedado en aquella isla) es causa de que no se saque en abundancia; sacando, empero, los que en ella están, para pagar sus tributos y rescatar ropa y otras cosas necesarias para su sustento, sin cuidarse de más, que con esto solo se contentan.

Chapter 12

CONCERNING THE MINERALS OF GOLD, SILVER AND OTHER METALS; PRECIOUS STONES, COLORS, TINTS AND OTHER THINGS OF VALUE

I do not treat here of the mines that are worked on the island of Manila, on the coast that faces the seas of New Spain and in the mountains called *Paracale*. Although they belong to the Bisayan natives who reach that far and some even beyond, due to their distance from these others of the Bisayas, about which I deal with especially, and about which we have information (although they are widely known and famous) that is only hearsay. In this way some people are easily deceived because they believe all of it. I shall only speak generally of what I heard when I was on the coast of Ibabao or Palapag, which is more to the south, about two degrees separated from that *Paracale*. It is there that they say much gold, of good quality, is found (without the iron of which a substantial amount is always taken out), silver, brass and still another metal which is seldom found and seems like gold, but is not. However, it surpasses the finest brass. I do not know what they have called it, for it does not seem to be the *auricalco*, so called in ancient times

I come to the mining in these Bisayan Islands where the largest quantity of gold is taken from the rivers and streams, which they call washing places, because they wash the gold in trays or other vessels, separating it from sand and soil. The washing place of the island of Masbate has always been famous here; the lack of anyone to work it (because very few natives have remained in that island) is the reason why it is not taken out in abundance. However, it is taken by those who are there to pay their tributes and to exchange for clothing and other things necessary for their sustenance, without caring about getting more. They are content with only this much.

Lo mismo casi es en el que está en la Isla de Bohol⁶, y llaman al paraje donde se halla, Cabicluran⁷, que también se beneficia poco, por faltarles codicia a los indios, o, por mejor decir, sobrarles pereza, y así sólo cuando la necesidad los obliga, acuden a lavarlo, dejándolo para el último refugio, pues no puede faltar. Y cierto que he oído decir, por haber estado por allá cerca, que hay indios que, con moderado trabajo, sacan dos o tres reales de peso en un día, que, a no ser ellos de suyo tan flojos, fueran de cuantiosos caudales.

Al modo de estos hay otros de menos nombre (dejando los de las costas de Caraga,⁸ de Bisayas también, donde se maneja más este ministerio, y se saca en más cantidad), y rara es la isla, aun de las pequeñas, que no tenga algo de esto; y en la de Panamao, de que ya hemos hablado, dicen se hallan minas que dan muestras de ser muy ricas, y ya yo he visto oro sacado de ellas, pero no se labra porque ni en la dicha isla hay gente para ello, ni los indios cercanos se amañan para hacerlo, porque les pidieran más de lo que sacaran, y así ni aun decirlo quieren.

En la misma isla (ya tocamos en ella cuando de los gusanos de seda, que es de las más ricas en todo género de metales, caza, pescas, cera, etc.) se hallan minas de yeso, en que hay mucho. Hélo mandado yo sacar y es tan bueno como el que se trae de China, de minerales también, aunque éste de acá es más moreno.

El azufre es [en] tanta cantidad cuanta quisieren sacar. (Descubrióse estando yo allí cerca, y el primero a quien vino la muestra fui yo, y la llevé a la ciudad de Manila). Es de azufre amarillo limpísimo, que reluce como espejuelos, y tiene una cosa notable, que crece siempre y, habiéndose cavado la semana pasada, en la siguiente se halla parejo el suelo, como si no se hubiera sacado nada. Hay una mancha de más de cien pasos de largo, aunque menos ancha, que toda es de dicho azufre, sin otras menores.

Hay también piedra alumbre, alcaparosa o vitriolo, varios colores como ocre, almagre y otro que acá llaman *porog*⁹, con que se da color a los jarros de barro y aun al oro, y otras muchas cosas de estima, y no faltaran algunas piedras preciosas si se buscaran, pues se van hallando

The same is almost true of the washing place that is on the island of *Bohol*. They call the place where it is found *kabuluran*. This is also little worked because of the lack of greed of the natives or to say it better, they are overcome by indolence. Thus only when necessity obliges them do they come to pan it, letting it go for a last resort because it can never be lacking. Certainly, I have heard it said, when I was near there, that there are natives who with moderate work extract two or three *reales* by weight of gold in a day. If they were not so naturally indolent, they might become very wealthy.

Similar to these, there are other mines of less renown (omitting those of the coasts of *Caraga*, also belonging to the Bisayas, where they carry on this work on a larger scale and extract gold in greater quantity). Rare is the island which does not have some of this; on *Panamao*, about which we have already spoken, they say that mines have been found that show evidence of being rich [in gold]. I have already seen gold taken from them, but they are not worked because not even in that island are there people to do so. Nor, are the natives near ready to do so, because they would be asked for more than they took out. Thus they even do not want to hear of it.

On the same island (we have already touched it on treating the silkworms and is one of the riches in all classes of metals, game, fish, wax, etc.) are found mines of gypsum in which it is plentiful. I have ordered it to be extracted and it is as good as that brought from the mines of China. However, this over here is a darker brown.

The sulphur is in sufficient quantity for everyone to take out as much as one wants. (It was discovered while I was near there. I was the first to whom the specimen was shown and I took it to the city of Manila). It is yellow sulphur, very pure and shines like small looking glasses. It has a remarkable feature that it continually grows; having dug it out last week, by the following week the ground is level as if nothing had been extracted. There is a plot of ground of more than one hundred *pasos* in length, but not so wide, and the whole is of this sulphur without any smaller plots.

There is also alum, ferrous sulphate or vitriol, various dye colors, like red ocher and another which is called here *porog*, with which the earthen jugs and even gold and other valued objects are colored. They would not lack various precious stones, if they would look for them, for occasionally some rough ones are found (as I have heard from informed

brutas algunas acaso, (que según he oído decir á algunos entendidos) se presume hay diamantes y otras que lo parecen.

Hállanse diamantes en la isla de Otón, y yo sé de una persona fidedigna que lo vio [en] un mapa del¹⁰ lugar y señas de un monte, donde sacó otros algunos que, labrados, pasaron por diamantes de Ceilán¹¹, y le valieron muchos ducados al que los halló, que por haberse (por no sé qué accidente que le obligaron a ello) ausentado de estas Islas, estando en la ciudad de Macan¹², habitación de portugueses en el reyno de la Gran China, escribió a un su amigo acá para que fuese a dicho lugar, y la persona que vio la dicha carta, con su mapa y señas me lo contó a mi, individuando todas las señas que tienen los diamantes brutos, o las piedras que los tienen en sus senos escondidos que, quien las ignora, no las conocerá aunque las vea.

No faltan acá [otras] piedras de menos estima que los diamantes. Hállanse las que llaman los españoles “ojo de gato,”¹³ porque de noche en especial reluce casi como ellos, y de día, puestos donde les dé el sol, imitan un sol entero con sus rayos. Fuera de esto, son eficaces contra veneno, y dicen de ellas que, al que las trae, no le puede dañar cosa que lo sea, y culaquier vaso, en que estuviere algo ponzoñoso, se quiebra y hace pedazos en su presencia. He visto yo alguna de ellas, halladas en estas Islas, y son hermosas, aunque blancas, del tamaño de garbanzos y mayores, algo chatas como la fruta en que se hallan. Esta es una fruta, que llaman *batoan*¹⁴, de que ya traté arriba, y género de naranjas, aunque de muy gruesas pepitas que, cuando maduras, sólo tienen las dichas pepitas y el pellejo en medio de dichas pepitas, y, como en el corazón de la fruta se hallan dichas piedras, aunque raras, que todo lo precioso lo es.

En el corazón de los limones, que en España llaman “ceuties,” y aquí *eres*¹⁵, se hallan también piedras, o perlas, de mucha estima. Yo he visto una que me la mostró el mismo que la halló. Era del tamaño un garbanzo redondo, el color como de perlas pero tira a algo violado, de muy claro el resplandor, no menor que el que en las uniones se halla, y el mismo me dijo habían visto otra, u otras, que se había hallado en dichos limones. De estas dicen que *fovent venerem*¹⁶; no sé qué verdad sea.

De las que se hallan en algunas anguilas, y otros peces, trataremos en su lugar; que aquí solo hablo de los que se hallan en la tierra.

persons relate). Presumably there are diamonds or other stones that took like them.

Diamonds are found on the island of *Oton*. I know of a trustworthy person who saw it in a map of a place and indications of a large hill where he had taken out stones which, when finished, passed for diamond of *Ceilán* and they were worth many ducats to the one who found them. Because he was away from these islands (I do not know what reason obliged him to be so) while he was in the city of *Macao* (a settlement of the Portuguese in the Kingdom of *Great China*) he wrote to one of his friends here to go to that place, and the person who saw this letter with its map and evidence related it to me, indicating specially all the evidence that they have rough diamonds, or the stones which contains them, in hidden cavities of the ground, and whoever does not know this would not recognize them even if he saw them.

There is no lack here of other stones of less value than the diamonds. There are found those which the Spaniards call *cat's eyes*, because at night especially they shine almost like the latter. In daytime when placed where the sun strikes them, they resemble a full sun with its rays. Besides this they are effective against poison. They say about them that anyone who carries them cannot be harmed by anything whatsoever, and any glass in which there may be something poisonous will break and shatter into pieces in their presence. I have seen some of these found in these islands and they are beautiful, although white, of the size of a chick pea, even larger, somewhat flat like the fruit which they are found. This is a fruit which they call *batoan*, of which I discussed above. It is a kind of an orange but with very large seeds; when ripe all there is the seeds and the skin. In the middle of these seeds, and as though in the heart of the fruit, are found these stones. But they are rare, for whatever is precious is rare.

In the center of the lemons, which they call *ceuties* in Spain and here *eres*, stones or pearls are also found of great value. I have seen one which was shown to me by the same person who found it. It was the size of a chick pea, round; its color like a pearl but tending somewhat to a very clear violet, with no less luster than is found in matched pearls. He himself told me that he had seen one or more in these lemons. About these they say that they help the passions; I do not know what truth there may be in this.

About those stones which are found in certain eels and other fish, we shall treat in their place. Here I only speak of those that are found on land.

De las cornerinas no sabemos las minas por ahora; que las haya, indica la mucha abundancia que de ellas tenían los naturales de estas Islas, pues apenas había mujer, aun de las más ordinarias, que no tuviese collares de ellas. Y aunque al presente se ven no pocos de estos collares, respectivamente de lo que tenían antiguamente apenas es nada, porque las más finas se las han ido sacando los españoles, compradas por su justo valor — y fueron los menos — o quitadas por fuerza, dándoles algunos poco, otros nada, en su recompensa. De uno de los más primitivos corregidores de estas Islas, me dijo una persona antigua y pláctica¹⁷ en ellas, que sabía había juntado algunas gantas, o almudes, de ellas. Lo mismo casi les ha sucedido con el oro, y así no me espanto que ni busquen ni labren nada de esto, pues no se les logra.

De las perlas y sus pesquerías trataremos cuando de la mar. Añado aquí las vetas, o venas, que se suelen hallar acá, de brea,¹⁸ que hasta que lo vi no lo creía. Suélese hallar cantidad de dicha brea en la tierra, en especial en montes o cañadas, donde hay un género de piedras delgadas, o pizarras, y de materia menos¹⁹ sólida que las piedras, o losas duras, y entre ellas se halla entreverada esta brea.

Hallándome yo en un pueblo llamado Palanas²⁰, que quiere decir “losas,” por ser todo el mar, en la orilla donde está dicho pueblo, como enlosado de ellas, y allí reparé no pocas veces en la baja mar, que entre losa y losa, que son muy duras, se halla uno como betún más blando, y a modo de cal, que las tiene tan unidas y parejas como si hubieran puesto de industria y con mucho cuidado y no produciéndose naturalmente. Y en un montecillo, o morro, que allí está, que tendrá de piedra tajada dos picas o tres, poco más o menos de alto, admiré varias veces el orden y proporción en que están²¹ dichas losas, no a montón, como se ven en otros, sino distinguidas, mediando entre las losas otro como betún que remeda a cal o yeso; que, cuando no se supiera el modo con que se había de edificar, de aquella natural construcción se podía aprender; de donde se colige que la naturaleza fue la maestra de los edificios, como de otras muchas cosas que despues ha perfeccionado el arte tanto, como vemos en otras partes más políticas, y en estas en algunas cosas.

Estando, pues, yo en este dicho pueblo, con una grande avenida se arrancó en un riachuelo, poco distante de él, un grande árbol que estaba en un montecillo de piedras al modo dicho, y consigo se trajo no

As regards the carnelians, we do not know about any mines at present. That they exist is indicated by the great quantity of these stones that the natives of these islands possessed. For there was hardly a woman, even of the most ordinary class, that did not have necklaces of them. Although at present many of these necklaces are seen, in comparison to what they used to have in ancient times, they are almost none, for the finest have been taken away from them by the Spaniards, either purchased for their just price, and these were the lesser number, or taken by force, giving some of them little, others nothing in return. An elderly, well-informed person told me about one of the earliest *corregidores* of these islands, she knew who had collected some *gantas* or *almudes* full of them. Almost the same thing has happened to them in the case of gold; so that I am not surprised that they do not look for it nor work it since it does not profit them any.

Concerning pearls and other aquatics, we shall speak when we treat about the sea. I shall mention at this point veins of pitch which are found here. Until I saw it I could not believe it. One can usually find quantities of this pitch in the ground, especially in the mountains or valleys between them where there is a kind of thin rock or slate and of material less solid than the stones or flagstone. Between them is found inserted this pitch.

Finding myself in a town called *Palanas*, which means flagstones, because all along the shore of the sea where this town is located, the ground is laid over with them (and I frequently came to realize during the low tide that between at low tide). Between one layer of stone and the next, which are very firm, is found something like a very soft cement, and in the manner of lime, which holds them as united and even as if they had been placed there designedly and with great care and the effect was not produced naturally. On a little hill or mound that was located there, which had jagged stones two or three *picos* in height, I often admired the order and proportion in which these slates were placed; not piled up together as seen in other mounds, but separate, and between the slates, separating them, another substance like cement which resembles lime or gypsum. When one does not know the manner in which to build, he can learn from that natural construction. Hence, it may be concluded that nature was the instructress of building, as well as many other things which are perfected afterward by art, as we see in other more civilized places and in some things here.

While I was in that town, a large tree, a short distance from it, was pulled up by the roots in a great flood. It was situated on a little

pocas de ellas, en que estaban entalladas las raíces; en lo que quedó, pues, descubierto se hallaron dos o tres vetas de dicha brea, que por curiosidad quise yo verlo. Fui allá y hallé que habían sacado no poca cantidad, y que en las peñas que estaban aun sin haber padecido ruina, se veían las vetas de dicha brea. Era esta (tengo aun para señal, cuando esto escribo, un pedacito de ella) de color violado, algo más dura y atezada, que la que llaman "pez griega,"²² dura como piedra, aunque, machucándola, se deshacía fácilmente, y, puesta al fuego, arde mejor que la brea de los árboles y hace menos humo.

Dicen de ella los indios que es muy medicinal, aunque ellos no se sirven de ella sino para tener luz en sus casas, haciendo unos como cartuchos muy largos y angostos, que llaman *agipo*²³ o *lansot*²⁴. Estos son de las varias hojas de palmas (en especial *anahao*¹⁸ de que tratamos arriba, por ser más a propósito que otras) y los llenan de dicha brea molida, y apretándola bien, y estos les sirven de candelas o hachones sin pabito, porque la dicha brea, o la de los árboles, sirven de sebo o pabito, y antiguamente (por no saber que la cera era a propósito) con esto solo se alumbraban en sus casas, y aun ahora también, por ser esto más barato y fácil de hacer que las candelas.

Con esta ocasión me desengañé que era verdad lo que les había oído decir muchas veces, de que se hallaban en la tierra minas, o vetas, de brea y por misma me trajeron de otro arroyo, que casi con la misma causa se había derrumbado, otro pedazo de brea; su color amarillo, y tan lustroso que parecía ámbar, de que se hacen varias cuentas y cosas; y, a no ser ésta tan quebradiza (como brea al fin) juzgamos²⁵ que lo era. La veta de esta brea era más delgada, porque del pedazo que me trajeron, sacado de entre las losas, que por lo blanco de la superficie se echaba de ver ser recién sacado, no tenía más de un dedo de ancho — aunque era cancho como un ladrillo — y de todos los lados constaba que era continuo y su veta seguida; de modo que esta brea, aunque lo era, en el olor,²⁶ era muy distinta de la otra, aunque iguales en el arder y lucir, que es su último ministerio.

No sólo se hallan dichas cosas en la tierra y montes, sino (aunque es más raro) se hallan ostras, o conchas, como las de la mar, en tamaño y hechura nada diferentes (lo cual, si supiera o hubiera averiguado

hill of stones of the kind mentioned. With it, it dragged out quite a few of these in which the roots had intertwined. In the part which was uncovered there was found two or three veins of this pitch which out of curiosity I wished to see. I went there and found they had extracted already a large quantity, and in the rocks which had not suffered damage were seen veins of this pitch. This was (I still have as evidence, as I write this, a little piece of it) somewhat of a violet color, a bit harder and darker than that which they call '*Greek bitumen*'. It is as hard as rock but when pounded it easily breaks up. Placed in fire it burns better than pitch from the trees and makes less smoke.

The natives say that it is very medicinal although they do not make use of it except to have a light in their houses. They make something like very long, narrow cartridges which they call *agipo* or *lansot*. These are of various kinds of palm leaves (the *anahaw* especially which we treated above, because it is more suitable than others). They fill them with this pitch pressed down well and these serve as candles or torches, without a wick, because this pitch or that of the trees replaces tallow and wick. In ancient times (because they did not know that wax could be used) by this means alone they lighted their houses and likewise even today because this is cheaper and easier to make than the candles.

At this, I no longer disregard the truth of what I heard and said many times that mines or veins of pitch were found in the ground. Similarly from another stream bed they brought me another piece of pitch has been torn up. It was a yellow color and so lustrous that it seemed to be amber from which they make various beads and things. If this were not so brittle (like the *brea*, in fine) we would judge that it was amber. The vein of this was thinner because the piece that they brought me was from between the slates. Because of the whiteness of the surface it was apparent that it had been recently taken out. It was not more than a finger in thickness, although it was as wide as a brick. It was evident from all the sides that it extended indefinitely and its vein continued on. Consequently, this pitch even though it was so, was very distinct from the other, although equal in burning and giving light, which is its ultimate use.

Not only are these things found on the land and in the mountains, but (although it is more rare) oysters or shells like those from the sea and no different in size and shape. (If a certain author knew or had investigated this, he would not have swallowed the argument that

cierto autor, no trajera por argumento, de que estas Islas habían sido mar, el hallarse en ellas y en los montes muy altos y lejos del mar, dichas ostras) que no son ni nacieron en el mar, sino en los montes. Tuve yo mi duda en creerlo a los principios hasta que un indio principal me desengañó y dijo que se crían en los montes, y en algunas quebradas de ellos, o de la humedad y de otras causas que no sabemos, y que él había hallado una muy grande, viva y con toda su carne dentro, de la misma calidad que las que se hallan en la mar que los naturales llaman *tilang*²⁷, y los españoles acá *taclobos*, y comido él y los compañeros (que se habían alejado mucho cazando) de su carne; y que, [aunque]²⁸ era aún algo más sólida que la del mar, era empero más sabrosa. Y la razón se lo dice que, con menos humor áqueo en la tierra del que en el mar le sobra, había de ser más sólida y con más calor recibido más inmediatamente del sol y sus influencias másazonadas y sabrosas. Y añadió más, que había otras menores a que no llegaron, porque con la grande les sobró y dejaron no poco de la carne por no cargarlas y llevarlas de tan lejos.

Con esto salí yo de la duda de quién había llevado a un monte (el más alto de la isla de Leyte y que no es menor que los otros mayores que se hallan en estas), llamado *Amandivi*²⁹, en cuya medianía se ve hoy una de estas ostras (hélo oído [a] muchos y, entre ellos, Padres Ministros que la han visto) en que se podría lavar muy bien una persona tendida. Dicen que es capaz de cuatro, o más, tinajas de agua, y que allí la suelen hallar y dulce, buena aun en tiempo de secas, por conservar la que recibe de las lluvias, y que, a no beberla y hocicarla los puercos de monte, raras veces le faltaría³⁰, la cual, así por su grandeza como por la pereza y flojedad de los indios, era imposible que fuese llevada a manos, y más tan lejos.

La altura del monte, y su grande circuito, persuaden ser hecho en la primera formación del orbe, y, con la origen dicha y experiencia del que la vió y comió, se convence (además de su sentir común de ellos) de que las cría la tierra, y lejos del mar, pues no hay razón que pueda probar lo contrario, ni causa que le obste a la divina Omnipotencia.³¹

these islands had been once under the sea, because these shell fish are found in them and in the very high mountains and far from the sea). They are not nor were they ever born in the sea but in the mountains. I had my doubt believing it in the beginning until a native *Principal* undeceived me. He said that they grow in the mountains and in some of the rugged terrain among them, either from the moisture or other causes that we do not know about. He said that he had found a very large one; alive and with all the flesh within it, of the same character as those which are found in the sea, which the natives call *tilang* and the Spaniards here *taclobos*. He and his companions (who had separated widely while hunting) had eaten of its flesh. And although it was somewhat tougher than that of the sea, it was nevertheless more savory. The reason for this is that with less liquid humor in the land variety than in that of the sea, the former would have to be tougher, and because of the greater heat received directly from the sun and its powers, it was more seasoned and savory. He added also that there were other smaller ones which they did not examine because they had more than enough with the large one, and they left a substantial part of the flesh because they could not carry it and take along from such a distance.

As a result, I dismissed my doubt about who had carried an object up a mountain (the highest of the island of *Leyte* and which is not smaller than the other large ones to be found in these islands called *Amandiwi*. Half way up, one can see today one of these oyster shells (I have heard this from many, and among the Father ministers who have seen them) in which a person stretched out could comfortably bathe. They say that it has a capacity of one or more jars of water which they can usually find in it, sweet and good even in the dry season through conserving what is received from the rains, provided it is not drunk and upset by the wild hogs, there is rarely a shortage. Due to the size of the shell as well as laziness and indolence of some natives, it was impossible to carry it by hand, and especially for such a distance.

The height of the mountain, its great circumference are persuasive evidence that it was fashioned in the original formation of the earth. Because of this origin and the findings of the one who saw the shellfish and ate it (besides the common opinion of the persons) it is certain that the land nurtured them and far from the sea, for there is no argument which can prove the contrary nor a cause which may obstruct Divine Omnipotence.

Y, después de estas noticias, leí un cierto autor (que cita a Plinio) hallarse en algunas partes géneros de ostras y ostrones que se crían en la tierra y muy lejos del mar, con lo que dudé menos de la verdad de todo lo dicho; y aunque pudiera en su conformidad allegar aquí un arroyo que está entre el río Jaro³², y otro que llaman de *Binahan*³³, camino de Dagami, y sale de dicho monte, en que se hallan muchos géneros de almejas y mariscos, que sólo se hallan en la mar y no en otro alguno de los ríos circumvecinos (hélos yo visto), y los indios en él no se atreven nombrar animales de la tierra (por cierta superstición suya de que trataremos), no lo hago por no alargar más esta materia.

Acabaré este capítulo, y en él las cosas de la tierra (dejando muchas, o por ordinarias y comunes a otras partes, o por no tan célebres y averiguadas) con los terremotos (pues sucede[n] en ella) de que son muy infestadas³⁴ estas islas por causa de serlo, pues (como saben los filósofos) o sean las aguas del mar, como quieren algunos, y más en islas que traspasan sus senos o concavidades, o los vientos en ellas admitidos, como quieren otros; o sea el sol que con sus calores produce y cría exhalaciones ígneas de sus entrañas, que es tercero sentir, todas estas causas en estas Islas lo pueden ser, y más si se juntan (que es lo más cierto) para que padezcan, como padecen, tan ordinarios, terribles y aun espantosos vaivenes, estremeciéndose todas estas Islas, quizás si no más, sin duda no menos, que cualquiera otra parte de todo el universo. No trataré aquí de los muchos que ha padecido, y padece la ciudad de Manila, y sus repetidas y lamentables ruinas (de que otros tratarán) que, aunque cabeza de este Archipiélago en todo, como hablo aquí de las islas de Bisayas, sólo la parte de esta grandiosa isla en que ellas están fundadas, es sujeto de esta mi *Historia*.

En nuestras islas de Bisayas no son tanto los daños y ruinas, aunque la causa de los continuos y recios terremotos no es menos, por ser los edificios nuestros de palos y maderas, menos expuestos a sus violentos impulsos; y los de los naturales, por lo pequeños, menos vestidos. Con todo a las veces ha sucedido caerse algunas casas de los indios con su ímpetu, derrumbarse³⁵ montes, abrirse la tierra en profundas cavas y salir de ellas ya humo azufrado, ya agua en cantidad. Y este presente año de 1665 (dejando los muchos de los pasados) en que

After receiving this information, I read a certain author (who cites Pliny) that there was found in various places varieties of oysters and *ostrones* which grow on land and very far from the sea. Consequently, I have been less doubtful about the truth of what has been described. I could, in agreement with this, mention a rivulet which is between the *Jaro* River and another which is called *Binahan*, on the road from *Dagami* and emerges from this mountain, where there are found many kinds of seashell and edible mollusks, which are only found in the sea and in no other of the neighboring rivers (I have seen them). The natives do not dare to mention them by name as denizens of the land (because of a certain superstition of their of which we shall treat). I shall not do so, so as not to lengthen further this material.

I shall finish this chapter, and in it the things of the land (leaving out many either because they are ordinary and common to others places, or because they are not so well determined and investigated), with the earthquakes (that occur in it,) by which these islands are most troubled. The reason for this (as the philosophers may know) may be either the waters from the sea, as some would have it, and especially in islands where they overflow their hollows or cavities; or the winds entering into them, as others would have it. Or possibly the sun which with its heat produces and develops fiery exhaltations in its bowels. This is a third opinion. All these can be the cause in these islands and especially if combined, which is more certain, so that all these islands sustain, as they do frequently, terrible and even fearful vibrations and shaking, perhaps if not more, certainly not less than any other part of the universe. I shall not discuss here about the numerous earthquakes which the City of Manila has suffered and suffers and its repeated and lamentable ruins (of which others will speak). Although it is the capital of this archipelago, as I speak here, concerning the islands of the Bisayas, only the part of that grandiose island where they are situated is the subject of this my *Historia*.

In our islands of the Bisayas, the dangers and destruction are not as great, although the occasion of the long drawn out and violent earthquakes is not less, because our dwellings are of poles and wood; less vulnerable to their violent impulses. Those of the natives because they are small, are less often affected. Nonetheless, at time various houses of the natives have been caused to fall with the force of the quake. Mountains are cast down, the ground opens in deep chasms, sometimes emitting sulfurous smoke, sometimes quantities of water from them. This present year 1665 (omitting many of the past) in which

esto escribo, el día de la Anunciación, 25 de marzo, hubo uno tan grande y prolijo que dicen los indios actuales, y algunos muy viejos, no tener memoria de haber visto otro tan tenaz en su duración.

Con mayor fuerza comenzó a la una y media, poco más, o menos de la tarde, y duró casi toda ella, aunque no siempre intenso sino como pulso con intercadencias, ni tan recio en su agitación, pues los primeros enviones fueron los mayores que yo he advertido hasta ahora, y duraron más de seis u ocho *Avemarias*, que recé yo mientras [duraba y]³⁶ lo padecía, esperando con cual de ellos se caía la casa de piedra en que estaba, y por ser de paredes muy gruesas y poco alta, aguantaron valientemente; de modo que no hay duda ninguna ser estas Islas no sólo muy expuestas sino combatidas, y aun maltratadas, de los terremotos. Y con ésto pasemos al elemento de las aguas y sus cosas notables.

I am writing this, the day of the *Annunciation*, the twenty-fifth of March, there was one so great and long lasting, that the present-day natives and some very old ones say that they do not remember having seen another so tenacious in its lasting powers.

With its great force it began at one thirty or a little more in the afternoon and lasted almost all that afternoon, although not always as intense but like all quakes with pauses, nor as violent in its agitation. For the first quakes were the greatest that I have experienced up to now and they lasted during more than six or eight *Ave Marias* that I prayed while it lasted. I was waiting which of the quakes the stone house in which I was would fall. Because it had very thick walls and not very high, it sustained the blows valiantly. And so, there is no doubt that these islands are not only most exposed, but most attacked and even devastated by the earthquakes. With this we shall pass on to the element of water and its notable things.

Chapter 12

ANNOTATIONS

¹ *Paracale*. This is an ancient town situated today in the Province of Camarines Norte and famous for its gold mines. It belongs to Bicolan speaking Region in Southern Luzon. The *pueblo* was founded by the Franciscans in 1581. Cf. P. Lorenzo Perez, O.F.M., in *Ensayo de una síntesis de los trabajos realizados por las corporaciones religiosas de Filipinas*, ed. Por el P. Valentin Marin y Morales, O.P., (Manila, 1901), Vol. II, p 408.

² *Estar* is not found in Muñoz.

³ In Muñoz, *que*.

⁴ *Auricalco*. From the Latin *orichalcum* and this from the Greek *orechalcos*, copper from the mountains. Copper, bronze or brass.

⁵ A large island situated off the northwest coast of Samar and off the southern tip of Luzon. Today it is a province composed of the three main islands of Masbate proper, Burias and Ticao.

⁶ *Bohol*. Constantly cited in ancient histories and chronicles as either *Bool* or *Bojol*. Our copies of Alcina such as *Copia Naval* and *Copia Muñoz* are not consistent in the spelling. Sometimes we have *Bool* and others *Bojol*. We transcribe it in our edition as *Bohol*, the normal spelling in English and in Encyclopedias of Geography. This is one of the Bisayan islands belonging to the Central Bisayas which comprises the provinces of Negros Occidental, Cebu and, of course, Bohol. It is the eighth largest island in the Philippines Archipelago, with a land area of 1,534 square miles. Dupree, *op. cit.*, pp. 186-188. The Samar-Liñeyte word *bool* means "husk of the morisqueta." It is a maritime tree, with circular leaves and fruit. This is poisonous, at least the pulp. The Island of Bohol is shaped like an irregular circle. Sánchez, *op. cit.*

⁷ In Muñoz, *Cabuluran*. This Bisayan word means: hill; small mountains, according to Tramp, *op. cit.*, p. 72. Sánchez has an entry in his *Vocabulario* under *bólor*: hill, little mountain. *Caboloran*, *caborlan*: where these are little mountains. In the boat, the living quarters going up in the middle are called *bororlan*. *Magbolor*: those who live or stay there, like the *datus* and men who do not row. *Op. cit.*

⁸ *Caraga* is the ancient name for the northernmost and easternmost region of Mindanao, known as *Caraga antigua*. Cfr. Artigas y Cuerva, *op. cit.*, p. 36. The first land annexed to Spain by Magellan in 1521. Called also in ancient Spanish times "corregimiento de Butuan," from which the corregimientos of Iligan and Dapitan were dismembered. The *caragas* were brave, ferocious and, at times, very cruel. *Glosario General*, p. 495. *Caraga* is the ancient name. Artigas y Cuerva, *op. cit.*, p. 36.

⁹ *Porog*. Colored earth which provides the color of gold. *Magpoporog*. To give color to gold or dye something with *porog*. Red wood; the hard and heart of the wood. Sanchez, *op. cit.*

¹⁰ In Muñoz, *que vió un mapa de un*.

¹¹ Today known as Sri Lanka with its capital Colombo.

¹² *Macan*. The old name for Portuguese Macao. The Chinese name is *Ao-men*; it is an island of South China Sea near the mouth of the *Chu Kiang*, and 40 miles west of Hong Kong. It is a Portuguese colony consisting of this island and two small islets offshore. It will revert to China at the end of 1999, after almost 450 years in Portuguese hands.

¹³ *Ojo de gato*. Agatha, of orbicular shape and white, yellowish color, with fibers of asbestos and amianthus. Cfr. *Diccionario de la lengua española*, Real Academia, Madrid, 1984, h-zuzón, 974.

¹⁴ *Batoan*. The word is derived from *bató*: *Batohon* or *bethon* which means 'a stone'. *Batobato*, *batohay* is a small stone. *Cabatoan* or *cabatohan*, stony ground. *Batohon*, something of stone. Sanchez, *op.cit.*,

¹⁵ We have been unable to locate this word.

¹⁶ 'They promote venereal pleasure'

¹⁷ In Muñoz, *plática*.

¹⁸ *Ebra*, in the Copia Naval here.

¹⁹ In Muñoz, *más*.

²⁰ A town situated on the western coast of Samar, between the Capital of Western Samar, Catbalogan and Calbiga. Its ancient name was *Paranas* or *Palanas*, and this is how most of the folks still call it today. The change of name came sometime after the American occupation of the Philippine Islands, at the turn of the century, and named after Luke Wright, seemingly an American Governor General for a short time.

The word *Paranas* or *palanas* means flagstone, slabstone: *Paranasun*, or *palanasun*, where there are found flagstones. Sanchez, *op. cit.*

Tramp has it entered as a Tagalog word. It is not; it is a Samar-Liñeyte Bisayan term, as shown above. The meaning; smooth stone; stone; stony place; level stony river bank. *Op. cit.*, p. 324.

²¹ In Muñoz, *estaban*.

²² *Pez griega*. Resin, colophony. *Pez griega*, also called *colofonia*, from the Latin colophonia and this from the Greek *colofwnia*. A very solid resin, translucent, grey or yellowish and inflammable. Cfr. *Diccionario*, a-guzpatarra, 338.

²³ Sanchez has the entry under *aguipo*; like a partly burned stick; firebrand. *Op. cit.*

²⁴ *Lansot*. Perhaps, it should read *lánot* or *lansóc*: *Lanot*, the fiber of the abaca. *Maglanot*, to make a *lanot*. Kinds of *lanot*: *dahul*, large; *hablunon*, ordinary; *catungan*, very fine; *Nahot*, extremely fine; *Palid*, the hair of the fiber; *Caligyaon* or *cadigyaon*, little fibers. Most probably it is this: *lansóc*: a torch of tar. *Maglansoc*, to light up with it (i.e. the torch). Sanchez, *ibid.*

²⁵ In Muñoz Copy, *juzgáramos*.

²⁶ In Muñoz, *color*.

²⁷ Agigantic; a species of shell. Sánchez, *op.cit.* China and giant clams. *Tridacna*

squamosa, T. Croces, T. Maxima, & T. Gigas; nacre; mother-of-pearl. Tramp, *op. cit.*, p. 438.

²⁸ In Muñoz Copy, *aunque*.

²⁹ *Amandivi*. The highest mountain found on the Island of Leyte, in the Dagami region. Artigas y Cuerva, *op.cit.*, p. 264.

³⁰ In Muñoz Copy, *faltaran*.

³¹ In Muñoz Copy, *Providencia*.

³² *Jaro*. The word *haro*, in Samarnon means 'to smell bad'. *Ibid.*, p. 177. Sánchez defines it the same way: *naharo*, *mabaho*, *maharo*.

³³ *Binahan*. Perhaps, derived from the word *baho* a foul odor or a good smell. *Bahoan mo*, *cun anoy baho*, or *cabaho sadton sulpa*. *Bina*: *hoan ca sin tabaco*, etc. Sánchez, *op.cit.* Also perhaps from *baha*, flood, to have a flood. *Diri kamo makakasuba*, *kay nagbabahá*, you cannot go upstream because of the flood. Cfr. Sanchez de la Rosa - Alcazar, *op. cit.*, 27, Bisayan Part.

³⁴ In Muñoz Copy, *infestadísimas*.

³⁵ In Muñoz Copy, *derribarse*.

³⁶ In Muñoz Copy, *duraba y*.