

mountains in the heart of *Guiana*, a region, whither neither the *Portuguese* of *Para*, nor the *French* of *Cayenne*, have ever yet penetrated.

Notwithstanding all this, I must own, I should not easily believe these *Amazons* were now actually settled there, unless we had some more positive account of them, from time to time, from the *Indians* bordering on the *European* colonies, on the coasts of *Guiana*; and yet, this ambulatory nation may again have changed their abode. But, what seems to me more probable than any thing else, is, that they have now laid aside their ancient customs; whether they have been subdued by any other nation, or, whether their daughters, being weary of their solitude, have at last forgot the aversion their mothers had to mankind: wherefore, though, at present, no actual traces of this female republick should remain, this would not be sufficient ground for us to affirm there never was any such.

Besides, it would be enough to prove the reality of the fact, if there ever has been, in *America*, a female settlement, where no men lived in common with the women; their other customs, and particularly that of cutting off their right breasts, which father *D'Acunba* ascribes to them, on the credit of the *Indians*, are additional, and independent circumstances, that probably, have been alter'd, and perhaps added, by the *Europeans*, prepossessed with the manners attributed to the ancient *Amazons* of *Asia*; and the love of relating somewhat wonderful and surprizing, may have induced the *Indians* since to adopt it into their accounts. In effect, it is not said, that the *Cacique*, who forewarn'd *Orellana* to be upon his guard against these *Amazons*, called by him *Comapuyaras*, made any mention of their cutting off one breast;

breast; and our *Indian* of *Coari*, in what he told us of his grandfather, who saw four *Amazons*, one of whom actually suckled a child, spoke not one word of this particular, so very likely to draw his attention.

To return to the main point; if, in order to to deny it, the improbability, and almost moral impossibility of such a female republick's being able to establish itself, and subsist, should be alledg'd, I would neither insist upon the examples of the ancient *Asiatic Amazons*, nor yet of those modern ones of *Africa*, because what we read thereof, either in the ancient or modern historians, is at least intermingled with many fables, and liable to be disputed. I would content myself with only observing, that if ever there could be any *Amazons* in the world, it must be in *America*; where the vagabond lives of the women, who often follow their husbands to the wars, and are not a jot happier when at home in their families, might naturally put it into their minds, and at the same time afford them frequent opportunities to escape from the hard yoke of their tyrants; by endeavouring to provide themselves a settlement, where they might live independent, and, at least, not be reduced to the wretched condition of slaves, and beasts of burthen. Such a resolution, if taken, and executed, would not be at all more extraordinary, or more difficult, than what happens every day in all the *European* colonies of *America*; where it is but too common for slaves, when ill-used, or discontented, to run away in whole droves into the woods, and sometimes alone, when they can't get company, and there to spend many years, sometimes all their lives in solitude.

I know that all, or most part, of the *Indians* of *South-America*, are liars, credulous, and fond of any thing surprizing; but none of these people ever heard talk of the *Amazons* of *Diodorus Siculus*, or *Justin*. Nevertheless, a report of such a nation had obtain'd footing amongst these *Indians* in the center of *America*, before the *Spaniards* had penetrated thither; and mention has also been made of them since, among people who had never seen *Europeans*. This is evident, from the advice given by the *Cacique* to *Orellana* and his company; as also from the traditions related by the fathers *D'Acunba* and *Barazi*. Can it be believed, that savages, of countries remote from each other, had agreed, without any foundation, to invent the same story; and that this pretended fable had been so universally adopted at *Maynas*, at *Para*, at *Cayenne*, and at *Venezuela*, amongst so many nations, who don't understand, neither have any communication with each other?

As for the rest, I have not here enumerated all the authors, and travellers, of the several nations of *Europe*, who, for above two centuries, have affirmed the reality of the Existence of the *American Amazons*, whom some of them pretend even to have seen. I have contented myself with reciting those new testimonies thereof, which *Mons. Maldonado* and myself had an opportunity of collecting by the way. One may see this point treated of, in the apology for the first volume of the *Critical Theatre*, of the celebrated father *Feijoo*, a *Spanish Benedictin*, written by his learned pupil father *Sarmiento*, of the same society.

On the 20th of *August*, we set out from *Coari*, with a fresh canoo, and other *Indians*. The *Peruvian* tongue, wherein *Mons. Maldonado*, and our servants were well versed, and whereof I had myself

myself a little smattering, had served us, to make ourselves understood by the natives in all the *Spanish* missions, where they have endeavour'd to render it the general language; and at *St. Paulo* and *Jesé*, we had *Portuguese* interpreters, who spoke that of *Brazil*, which had, in the like manner, been introduced into all the *Portuguese* missions: But, not having found any at *Coari*, whither we could not get, notwithstanding all our diligence, till after the departure of the missionary's great canoo for *Para*, we found ourselves amongst *Indians*, with whom we could only converse by signs, or by the help of a short vocabulary of questions, which I had drawn up in their tongue; and which, unfortunately for us, did not contain any answers thereto. However, I made a shift to get some insight from them, especially into the names of the rivers. I observed also, that they were acquainted with several fix'd stars, and gave the names of animals to divers constellations. For instance, they call the *Hyades*, or bull's head, *Tapiera Rayouba*, from a word which, at present, signifies in their tongue, *the jaw of an ox*; I say at present, because, since oxen have been transported from *Europe* to *America*, the *Brazilians*, as well as the natives of *Peru*, have call'd them by the same name, which each of them gave, in their language, to the *elk*, the largest four-footed beast they were acquainted with, before the arrival of the *Europeans*.

Next day after our departure from *Coari*, in pursuing our course down the river, we left on the north side of us one of the mouths of the *Yapura*, almost a hundred leagues distant from the first; and the day following we passed on the south side the mouths of the river, now called *Purus*, but formerly *Cuchivara*, from the name

of a village near its entrance into the river of the *Amazons*. It was in this village the grandfather of the old *Indian* at *Coari* was visited by four of those warlike females, as was before observed. The *Purus* is not a jot inferior to the largest of those that fall into the *Maranon*; and, if the *Indians* are to be believed, it is equal thereto. Seven or eight leagues below their junction, perceiving the river free from islands, and between a thousand and twelve hundred fathoms over, I made the *Indians* row hard against the stream, in order to keep the boat, as much as possible, in the place, and could not find any bottom at the depth of a hundred and three fathoms.

On the 23d we entered *Rio Negro*, or the *Black River*, another sea of fresh water, which falls into the *Amazon* on its north side. The map of father *Fritz*, who never entered therein, and that last drawn by *De Lisse*, from that of the before-mentioned father, make this river run from north to south; whereas it is certain, by the report of all those who have gone up it, that it comes from the west, and runs to the east, only inclining a little to the south: nay, I am myself a witness, that its course is so for several leagues above its entrance into the *Amazon*; into which it runs in such a parallel line, that, were it not for the transparence of its waters, whence it derived its name of the *Black River*, it might be easily mistaken for a branch of the *Amazon*, only separated from it by the intervention of an island. We went up *Rio Negro*, two leagues to the fort built there by the *Portugueze*, at its narrowest part, which, on measuring, I found to be twelve hundred and three fathoms, and where I observed the latitude to be three degrees nine minutes. This is the first settlement of the *Portugueze* on  
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Inner Parts of South-America. 3

the north of the *Amazon*, as one comes down. *Rio Negro* has been frequented by that nation above a century; and they there carry on a great trade for slaves. They have there continually a detachment from *Para*, which encamps on its banks, to keep the *Indians* that inhabit them in awe, and favour the traffic before-mentioned, within the limits prescribed by the laws of *Portugal*; and every year this flying camp, to which they give the name of the *Company of Redemption*, penetrates higher up into the country. The captain commandant of the fort was absent when we arrived there, and we stay'd but twenty-four hours.

All the country hitherto discover'd, on the banks of the *Rio Negro*, is peopled by *Portuguese* missions, of the same *Carmelite* monks, whom we had met on coming down the *Amazon*, since our having pass'd the *Spanish* missions. On going up this river for a fortnight, or three weeks, they find it yet broader than at its mouth, by reason of the great number of islands, and lakes, which it forms; and, all this way, the land is high, so that it is never overflow'd, neither are the woods so thick; in short, it is a country quite different from that on the sides of the *Amazon*.

On our arrival at this fort, we had a particular account, of the communication of *Rio Negro* with the *Oroonoko*; and consequently, of the latter with the *Amazon*. I will not here enumerate all the different proofs of this communication, which I had carefully collected by the way; the most authentic thereof, at that time, being the not to be suspected evidence of a female *Indian* of the *Spanish* missions, on the banks of the *Oroonoko*, with whom I had spoken, who had

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\* Of the nation of the *Causacani*, and of the village and mission *Santa Maria de Bararuma*.

come in a canoo from thence to *Para*; because all these testimonies will become useleſs for the future, and muſt give place to one of a later date. I have juſt been informed, by a letter from the reverend father *John Ferreyra*, rector of the jeſuit's college, that the *Portugueze*, of the flying camp at *Rio Negro*, having failed up from one river to another in 1744, met with the ſuperior of the jeſuits, of the *Spaniſh* miſſions, on the banks of the *Oroonoko*, and came back with him, by the ſame way, without diſembarking, to their camp on the ſide of *Rio Negro*, which maintains a communication between the *Oroonoko* and the *Amazon*: The truth thereof can, therefore, no longer be diſputed. It would be in vain, in order to render it doubtful, to cite the authority of the late author of the *Oroonoko illuſtrated* \*, who, after having long been a miſſionary, on the banks of that river, repreſented this communication as impoſſible, ſo lately as in 1741; no doubt, he did not then know, that his own letters to the *Portugueze* commandant, and the chaplain of the *Company of Redemption*, were come from his miſſion on the *Oroonoko*, by this very way, by him repreſented as only imaginary, as far as *Para*; where I myſelf ſaw the originals, in the hands of the governor: But this author is himſelf fully undeceived, in this particular, as I have been informed by *Monſ. Bouguer*, who ſaw him, in 1744, in the *West-Indies*, at *Cartagena*.

This communication of the *Oroonoko* with the *Amazon*, newly confirm'd, may, with the more juſtice, be allow'd as a diſcovery in geography, becauſe, although the intercourſe, between theſe two rivers, is plainly repreſented upon the old maps,

\* See *El Orinoko illuſtrado*. Madrid, 1741, Page 18.

maps, all the modern geographers had suppress'd it in the new ones, as if by agreement; and it was treated as chimerical, even by those, who, one would have thought, should have been the best informed of its reality. Nor is this, in all likelihood, the first time, that probabilities, and conjectures merely plausible, have got the better of the well-avouch'd accounts of travellers; and that a spirit of criticism, carried too far, has caused that to be flatly denied, which ought only to have been treated as dubious.

But how is this communication kept open, between the *Oronoko* and the *Amazon*? Nothing but an accurate map of the *Black River*, which we shall have, when the court of *Portugal* please, can fully explain this to us. In the mean while, this is the notion I have formed thereof, on comparing the various accounts, I have collected, during the course of my voyage, with the several relations, memoirs, and maps, both in print, and manuscript, which I have been able to discover, and consult, as well upon the spot, as since my return; and, above all, on comparing them with those sketches of maps, my fellow-traveller and I have often drawn, under the eye, and according to the narratives, of the most intelligent missionaries and travellers, who have gone up and down the *Amazon* and the *Rio Negro*.

From all these put together, and clear'd up by each other, it follows, that a small *Indian* village, in the province of *Mocoo*, somewhat to the east of *Pasto*, as also more to the north by a degree, gives its name of *Caqueta* to a river, on whose banks it is situated. In advancing some way farther, this river is divided into three branches; one whereof runs to the  
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*North-east*, and is the famous *Oroonoko*; which discharges itself into the sea, over-against the isle of *Trinity*; the other takes its course towards the *east*, only inclining somewhat to the *south*, which is what is called by the *Portugueze*, as it advances farther, *Rio Negro*: a third branch, inclining yet more to the *south*, is the *Yupura*, so often before mentioned; which, as has been observed, in its proper place, is subdivided into several others. What remains farther to be known, is, whether it separates from the main stream above the two former branches, or, whether it is itself a part of the second branch, named *Rio Negro*: this is what I have, as yet, no knowledge of, but by guess; though some reasons induce me to think the first supposition most probable. However that be, it is still certain, that if the *Yupura* is once found to be a branch of the *Caqueta*, whose name was never so much as heard of, on the banks of the *Amazon*, all that father *D'Acunha* says of the *Caqueta*, and the *Yupura*, becomes easy to be understood, and reconciled. It is well known, that the different names, given to the same places, and especially to the same rivers, by the various people who live upon their banks, have always proved the bane of geography.

It is in this island, the largest in those parts of the world yet discover'd, or rather in this new *Mesopotamia*, formed by the *Amazon* and the *Oroonoko*, united together by the *Black River*, that search has long been made, for the imaginary *Golden Lake of Parima*, with the equally chimerical city of *Manoa del Dorado*; a search, which has cost the lives of so many men, and, amongst others, of Sir *Walter Raleigh*, a famous navigator, and one of the greatest men *England* ever

ver produced, whose tragical end is sufficiently known. It is easy to perceive, by the expressions of father *D'Acunba*, that, in his time, they were far from being undeceived, with relation to this fine fable. I will, therefore, beg pardon, for a short geographical detail, which too properly belongs to the main article of my subject to be omitted; and which may likewise serve to clear up the origin of a romance, which nothing but the thirst of riches could have induced any one to believe; such as that of a city, whose house-tops, and walls, were cover'd with plates of gold; as also that of a lake, whose sands were of the same precious metal.

It will here be necessary to recall to mind, what has been before said, with relation to the *Golden River*; and the other facts already cited, and extracted from the accounts of the fathers *D'Acunba* and *Fritz*.

The *Manaos*, according to the last of these authors, were a warlike nation, dreaded by all their neighbours, who long withstood all the attempts of the *Portuguese*, with whom they are at present at peace, many of them being now settled, in the colonies and missions of the *Black River*. Some of them still make incursions into the territories of the savage nations, and the *Portuguese* employ them, to carry on their traffic in slaves. They were two of these *Indians*, who penetrated as far as *Oroonoko*, and carried off from thence, and sold to the *Portuguese*, the female *Indian*, of whom I have already spoken. Father *Fritz* says expressly, in his journal, that these *Manaos*, whom he saw come and traffic with the *Indians* on the banks of the *Amazon*, and who had their gold from the *Yquiari*, had their abode on the sides of the river *Yurubeck*. By much enquiry, I have  
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been informed, that, on going up the *Yupura* for five days, one finds on the right hand a lake, which may be cross'd in a day, call'd *Marabi*, or *Parabi*, which, in the *Brazilian* tongue, signifies *river-water*; and that, on dragging the canoo from thence, when it is too shallow, to other places that are overflow'd in the time of the inundations, one comes to a river call'd *Yurubech*, by which one may go down in five days into *Rio Negro*; which latter, some days voyage higher, receives another, named *Yiquiari*, that has many water-falls, and comes from a country abounding in mines and mountains. Can it be doubted whether these are the *Yurubech* and *Yquiari*, of the fathers *D'Acunba* and *Fritz*. The latter of these, upon the report of the *Indians*, of whom it is hard to get any clear and plain accounts, especially when one must have an interpreter, represents the course of these two rivers, as different from what it really is; making the *Yurubech* fall into the *Yquiari*; and this latter again into a great lake high up within the land, but their names are scarce alter'd. One sees, on the map of father *Fritz*, a great colony of the *Manaos* in the same parts, whom he calls *Yenefiti*, and of whom I could never get any positive account; but there is nothing extraordinary herein, the nation of the *Manaos*, having been transplanted and dispers'd: However, it is very probable, that the fable of the city of *Manoa*, had its rise from the capital of the *Manaos*; I stick only to such facts as are certain. The *Manaos* had a considerable settlement in these parts; they border'd upon a great lake, and even upon several great lakes, for they are very common in a low country, subject to inundations; the *Manaos* got gold from the *Yquiari*, and  
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made small plates thereof; these are all matters of fact; which, by the help of exaggeration, might give rise, as was before observed, to the fable of the city of *Manoa*, and the *Golden Lake*. Should it be objected, that there is still a wide difference, between the small plates of gold of the *Manaos*, and the golden roofs of the city of *Manoa*; and that there is the same between the gold spangles, wash'd out of the mines by the waters of the *Yquiari*, and the gold sand of lake *Parima*; yet it can't be denied, that, on one hand, the greediness and prepossession of the *Europeans*, bent upon finding, at any rate, what they were in search of; and on the other hand, the natural propensity of the *Indians* to lye and exaggerate, (which might be heighten'd by their being concern'd, in point of interest, to remove, to a good distance from themselves, such troublesome intruders,) might easily create some resemblance between accounts so seemingly dissimilar, and might alter and disfigure them so far, as to render them not to be known again. The history of the discoveries of the new world, affords us more than one example of such transformations.

I have now in my hands an extract of a journal, with a sketch of a map, drawn by a traveller \*, who, probably, is the most modern of all those, that were ever bent upon this discovery: It was shewn to me at *Para*, by the author himself; who in 1740, went up the *Essequeba*, which discharges itself into the ocean between *Surinam* and the *Oroonoko*. He says therein, that, after having traversed many lakes, and vast regions, sometimes dragging, and sometimes carrying his canoe, with incredible labour and fatigue, and

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\* *Nicholas Hortsman*, a Native of *Hildersheim*.

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without finding any traces of what he was in search of, he came at last to a river that runs to the south, which carried him into *Rio Negro*, into which it enters on the north side. The *Portugueze* have given it the name of *Rio Blanco*, and the *Hollanders* of *Essequeba* that of *Parima*; undoubtedly, because they believ'd it would lead them to the lake so called; as the same name has been given to another river, at *Cayenne*, for a similar reason. As for the rest, let it be believed, if people please, that the lake *Parima* was one of those which this traveller cross'd; yet he found so little resemblance therein with the idea he had conceived of the *Golden Lake*, that he seem'd to me very far from approving of this conjecture.

The limpid and clear streams of the *Black River*, or *Rio Negro*, had hardly lost their transparency, by their intermixture with the whitish and troubled waters of the *Amazon*, when we came, on the south side, to the first mouth of another river, no way inferior to the former, nor less frequented by the *Portugueze*. They have named it *Rio de la Madera*, or the *River of Wood*; perhaps, on account of the many trees it carries down its stream, at the time of its inundations. It will be sufficient, in order to give some notion of the length of its course, to say that, in 1741, they went up thereon to the neighbourhood of *Santa Cruz de la Sierra*, an episcopal See, in *Upper Peru*, situated in seventeen degrees and a half south latitude. This river is call'd *Mamora*, towards its upper part; where the missions of the *Moxes* are establish'd, whereof the *Jesuits* of the province of *Lima* publish'd a map in 1713, which was inserted in the twelfth volume of *Edifying and Curious Letters*; but the most remote source

of the *Madera* is near the mines of *Potosi*, and not far from the head of the *Pilcomayo*, which falls into the great river of *La Plata*.

The *Amazon* below *Rio Negro*, and the *Madera*, is commonly a league over; and when it forms any islands it is sometimes two or three; nay, at those seasons, when it has its inundations, it is no longer confined within any limits. It is here the *Portuguese* of *Para* begin to give it the name of *Amazon*; for, up higher they only know it by that of *Rio de Solimoes*, or the *River of Poisons*; a name which was probably given it on account of the envenom'd arrows, whereof we have already spoken; which are the most usual weapons of those nations that live upon its banks.

On the 23th, we pass'd by the river *Jamundas*, on our left, which father *D'Acunba* calls *Cunuris*, and pretends was that, where *Orellana* was attack'd, by those warlike women, whom he call'd *Amazons*. Somewhat lower, on the same side, we landed at the foot of *Pauxis*, a *Portuguese* fort, where the stream of the river is confined within a strait, nine hundred and five fathoms in breadth. The ebbing and flowing of the tide comes as high as this place; at least, it may be sensibly perceived there, by the swelling of the river, which is observed every twelve hours, and which falls later every day, as it does on the sea-coasts. The greatest height of the flood, which I measured at *Para*, being hardly more than ten foot and a half at the spring-tides, it follows that the declivity of the river, from *Pauxis* to the sea, that is, for the length of two hundred leagues, and upwards, or three hundred and sixty, according to father *D'Acunba*, can hardly be above ten foot and a half: And this agrees with the height of the quicksilver, which

I found, at the fort of *Pauxis*, fourteen fathoms above the level of the water, to be about a line and a quarter less than at *Para*, on the sea-side.

It may easily be conceived, that the tide of flood, which is observed at the *north* cape, at the mouth of the river of *Amazons*, cannot reach as high as *Pauxis*, two hundred leagues, and upwards, from the sea, in less than several days, instead of five or six hours, the usual time allow'd by the sea for that purpose. And, in effect, from the sea-coast to *Pauxis*, there are twenty stations, if we may so call them, which point out the progress of the tide each day, in coming up the river. In all these places, the effect of the tide of flood is seen, at the same hour as on the sea-side; and supposing, to render this more clear, that these different stations are about twelve leagues distant from each other, the same effect of the tides will be observed within the limits of those respective stations, at all the intermediate hours; that is, according to the supposition of twelve leagues, at an hour later from league to league, as it advances farther from the sea. The same may also be observed of the tide of ebb, at answerable hours. Besides, all these alternative motions, each in their respective places, are subject to fall, daily later and later, as on the sea-coast. This sort of progress of the tide, by undulations, very probably takes place likewise in open sea; and one would think, these retardations, in its course, ought to be yet greater and greater, from the point where the ebbing of the waters begins, even till they come back to the coasts. The proportion wherein the velocity of the tides abates, in going up the river; two contrary currents, which are observed at the time of flood, one at the surface of the water, and the other at some depth below it; two others also, one of which runs up-wards

wards along the sides, and makes its way swiftly, whilst the other, in the midst of the stream-runs downwards, and advances slowly; and lastly, two other contrary currents, which are frequently seen, on approaching the sea, in transverse canals, form'd by nature, through which, the tide flows into the river, on two opposite sides, at the same time: All these *phenomena*, whereof I know not that many have been observed before, with their different combinations, and various other accidents of the tides, which, undoubtedly, are more common, and more diversify'd than any-where else, in a river, where they probably run up to a greater distance from the sea, than in any other part of the known world, would certainly afford room for many curious, and, perhaps, new remarks: But, in order to give the less into conjecture, it would be necessary to have a series of exact observations, which would require a long stay in each place; a delay, which did not at all suit with my just impatience to return to *France*, after an absence that had already lasted almost nine years. Nevertheless, I did not fail to observe at *Para*, and in the neighbourhood of the *north* cape, another *phenomenon*, of the spring-tides, which is more extraordinary than any of the former, and whereof we shall treat in its proper place.

We were received at *Pauxis*, as indeed we had been every-where, since our arrival within the dominions of *Portugal*; the commandant of the fort detained us there four days, and one at his country-seat; after which he accompanied us to the fortress of *Curupa*, between six and seven days journey below *Pauxis*, and just half way to *Para*. The strictest, and most favourable orders, both for the safety and convenience of my passage, had been sent before me to every place; and they

they extended to all my company: I was indebted, for all the advantages thereby procured me, both on my way, and at *Para*, to a minister who loves the sciences, and knows the utility of them; the very same, whose vigilance was not wearied out, by providing for all the necessities of our numerous company, during our long stay at *Quito*.

In less than sixteen hours, we ran from *Pauxis* to the fortrefs of *Topayos*, at the mouth of a river of the same name, which is also one of the first rank: It comes down from the mines of *Brazil*, and runs through divers unknown countries, inhabited by warlike and savage nations, whom the *jesuit*-missionaries labour to civilize.

Of the ruins of the town of *Tupinambara*, formerly situated in a large island, at the entrance of the river *Madera*, was formed that of *Topayos*; and its inhabitants are almost the sole remains of the brave nation of the *Tupinambas*, who two hundred years ago govern'd *Brazil*, where their language is still retain'd. Their story, and their long wandrings, may be seen in the relation of father *D'Acunba*.

It is amongst these *Topayos*, that those famous green gems, call'd by the name of *Stones* of the *Amazons*, and which it yet remains a secret whence they originally come, are more easily to be had than elsewhere. They were formerly much sought after, on account of the virtues attributed to them, of curing the stone, the stone-cholick, and the epilepsy; insomuch that a treatise has been publish'd concerning them, under the name of the *Divine Stone*. The truth is, they neither differ in colour or hardness from the *oriental jasper*; they resist the file; and it cannot be imagined which way the *Americans* could cut them, and form them into the shape of divers animals.

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This, undoubtedly, gave rise, to a story hardly worth being refuted, though it has been very seriously reported; namely, that these stones were nothing else originally, but the mud of the river, which they moulded into what figure they pleased, by working it with the hand, when newly taken out; and which afterwards acquired its present extrem hardness, on being exposed to the air. Should one be sufficiently complaisant, to admit readily of this wonder, as to which some credulous persons could not be undeceived, till after their having in vain made trial of this simple process, there would still remain another problem, of the same nature, to be proposed to our lapidaries; namely, concerning the round and polish'd emeralds, bored through with two conic holes, diametrically opposite to each other, upon one common axis, which are yet to be found in *Peru*, in the province of *Esmeraldas*, forty leagues from *Quito*, on the banks of the river *St. Iago*; together with divers other monuments of the industry of its antient inhabitants. As to the green stones before-mentioned, they grow every day scarcer and scarcer, both because the *Indians*, who set a great value on them, will not easily part therewith, and because of the great number, that have been already carried to *Europe*.

On the 4th of *September*, we began to see plainly some mountains, towards the *north*, twelve or fifteen leagues within the land; this was a kind of a new sight to us, who had travell'd two months, from the time of our passing the *Pongo*, without seeing the least hillock. Those we then beheld, were the foremost of a long ridge of mountains, that reaches from *west* to *east*, whose summits are the points, whence the waters of *Guiana* take their rise. Those which direct their

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their course towards the *north*, form the rivers on the side of *Cayenne* and *Surinam*; and those which run to the *south*, after a very short progress, lose themselves in the *Amazon*. According to the tradition of the country, it is to these mountains the *Amazons* of *Orellana* have retired; they have also another tradition, not less generally received, and whereof they pretend to have had more evident proofs; which is, that these mountains abound in mines of divers metals: this point, however, is no better cleared up than the former, though it is of such a nature, as to excite the attention, of a much greater number of curious enquirers.

On the 5th in the evening, at sun-set, I observed the variation of the compass, to be five degrees and a half from *north* to *east*. Not having met with any place where to land, I made my observations upon the trunk of a tree rooted up, which the stream had driven to the side of the river. We had the curiosity to measure it, and found its length, between the root and the branches, to be eighty-four foot; and its circumference twenty-four, though it was dry'd up, and stripp'd of its bark. By this, wherewith we met by chance, by the largeness of the *Pirogues*, whereof we have spoken, that are made out of the single trunk of one tree; and by a table of one only piece, between eight and nine foot long, and four and a half broad, which we afterwards saw at the governor of *Para's*; one may judge the height and beauty of the woods on the banks of the *Amazon*, and of the several rivers that fall into it.

On the 6th, towards the approach of night, we left the main stream of the *Amazon*, over-against the fort of *Patu*, situated on the *north*  
side,

side, and newly rebuilt by the *Portuguese*, on the ruins of an old fort, which the *Dutch* formerly had there. At this place, in order to avoid crossing the mouth of the river *Xingu*, where many canoos have been lost, we went out of the *Amazon* into the latter, by a natural canal of communication. The islands, which divide the mouth of the *Xingu* into divers streams, prevented my measuring its breadth geometrically, but, to judge by the eye, it could not be less than a league. It is the same river which father *D'Acunha* calls *Paranaiba*, and which father *Fritz*, in his map, terms *Aoripana*. *Xingu* is the *Indian* name of a village, some leagues up the river, where there is a mission; it comes down, as well as that of *Topayos*, from the mines of *Brazil*, and has a fall on going seven or eight days upwards from its mouth, notwithstanding which, it is afterwards navigable for above two months. Its banks abound with two sorts of aromatic trees, the one call'd *cuchiri*, and the other *puchiri*. Their fruit is almost as large as an olive, which they grate, in the same manner as a nutmeg, and make use of for the same purposes. The bark of the former has the taste and smell of a clove, which the *Portuguese* call *cravo*; which has induc'd the *French* of *Cayenne*, corruptly to name the tree that produces it the *crabe-tree*; and if the spices, that are brought us from the east, left us any thing farther to desire, in this kind, these would be better known in *Europe*: they enter into the composition, of divers strong waters both in *Italy* and *England*.

After the junction of the *Xingu* with the *Amazon*, the breadth of this latter is so great, it would scarce be possible to see from one side to the other, even if the large islands, which occur one after the other, would allow a free passage for the

fight. There we began to be entirely freed from the *mosquito's*, *maringoins*, and gnats of all sorts, the greatest inconvenience we were troubled with, during the course of our voyage. They are indeed so intolerable, that the very *Indians* themselves do not travel, without a little tent of callico, to shelter themselves under during the night. There are certain times, and places, especially in the country of the *Omaguas*, when one is continually surrounded with a thick cloud of these flying insects, whose stings cause an excessive itching: but it is a certain fact, and worthy of observation, that, from the mouth of the *Xingu*, one is no more pester'd with them; at least, they are very seldom seen, on the right bank of the *Amazon*, as one goes down the river, whilst the opposite side is continually infested with them. After having reflected some time thereon, and viewed well the situation of the place, I judged this difference to proceed, from the river's altering its course thereabouts, and turning towards the north; and as the east wind blows there almost continually, it must necessarily carry those insects to the western side.

We arrived, on the 9th in the morning, at the *Portuguese* fortress of *Curupa*, which was built by the *Dutch*, when masters of *Brazil*. The king's lieutenant there received us with extraordinary honours, the three days we stay'd being one continual feast; in effect, he entertained us with a magnificence that border'd upon profusion; and which the country by no means seem'd to allow of. *Curupa* is a little *Portuguese* town, where there are no other *Indians*, but the slaves of the inhabitants; it is situated very agreeably, on a rising ground, on the

the *south* bank of the river, eight days sail above *Para*.

From *Curupa*, where the ebbing and flowing of the river is very sensibly to be perceived, the boats only go by the help of the tide. Some leagues below this place, a little branch of the *Amazon*, called *Tagipuru*, separates itself from the main stream, which runs to the *north*, and taking a quite contrary course towards the *south*, incompasses the large isle of *Joannes*, or *Marayo*, misrepresented on all the Maps. From thence it winds round to the *north* by the *east*, describing a semicircle, and soon after is lost in a sea, if we may so call it, formed by the confluence of several large rivers, wherewith it meets successively. The most considerable of these are, first, *Rio de dos Bocas*, or the river with two mouths, formed by the junction of the rivers *Guanapu* and *Pacajas*, above two leagues over at the mouth, which all the old maps, as well as *Laet*, call the river of *Para*. Secondly, the river of the *Tocantins*, larger yet than the former, which may be gone up for several months, and which comes down, like those of *Topayos* and *Xingu*, from the mines in *Brazil*, some fragments whereof may be seen in its sands. Thirdly, the river *Muju*, which I found, two leagues within the land, to be seven hundred and forty-nine fathoms wide; and whereon I met a frigate belonging to his *Portuguese* Majesty, that was running up full sail several leagues higher, in quest of some fine wood for joiners and cabinet-makers, that is very scarce, and dear, in all other parts. It is on the *eastern* shore of the *Muju*, the city of *Para* stands, immediately below the mouth of the river *Capim*, which had just before received another, called *Guama*. Nothing but the sight of a map, can give

give one a clear idea, of the situation of this city, upon the confluence of so many rivers; and shew, that it is not without some foundation, its inhabitants are far from imagining themselves upon the side of the *Amazon*; since, it is probable, not one drop of its waters wash the walls of their town: Just as we may properly say, the *Loire* does not arrive at *Paris*, tho' the *Loire* has a Communication with the *Seine*, by the canal of *Briare*. In effect, there is good reason to believe, the great quantity of running waters, which separate the main land of *Para* from the isle of *Joannes*, would not be sensibly diminish'd, should the communication of these streams with the *Amazon*, be intercepted, by the obstruction, or deviation, of that small branch of this river, which comes to take possession, if we may so say, of all of them, by robbing them of their names. All this, if people please, shall be allow'd to be only a dispute about words; notwithstanding which, I shall continue, in order to conform myself to the received opinion, to say, that *Para* is upon the eastern bank of the *Amazon*; it suffices that I have explained how this is to be understood.

I was conducted from *Curupa* to *Para*, without being consulted about the choice of my way, between divers islands, by narrow canals, and full of windings, that pass from one river to another; by which means they avoid the danger of crossing them at their mouths. But what contributed to my safety, and would also have been for the ease of another traveller, was extremely inconvenient for me, whose principal design was to compleat my map. I was forced, therefore, to redouble my attention, that I might not lose the chain

chain of my routs, in that winding labyrinth, of isles and canals without number.

I have not as yet spoken of the singular fish that are found in the *Amazon*; nor of the various kinds of uncommon animals, one sees upon its banks: These articles alone would furnish matter for a particular treatise, and this single study would require a voyage on purpose, and a traveller who had no other avocation; wherefore I shall only mention some few of the most extraordinary.

At *St. Paulo d'Omaguas*, I took a draught, after the life, of the largest of fresh-water fish hitherto known, which the *Portugueze* and *Spaniards* have called the *Sea-Cow*, or the *Bull-Fish*, and which we must not, by any means, confound with the *Phoca*, or *Sea-Calf*. This, we are now treating of, feeds upon the grass on the sides of the river, and its flesh and fat pretty much resembles veal. The female has paps, which serve to suckle its young. Some have endeavour'd to render its likeness to a cow or bull, yet more compleat, by arming it with horns, whereas nature has not provided it with any. It is not amphibious, if we speak properly, since it never comes entirely out of the water, neither can it; having only two fins, pretty near its head, and shaped like small wings, about sixteen inches long, which serve it both as arms and feet; so that it only advances its head out of the water, to reach the grass upon the river-sides. That, whereof I took a draught, was a she, seven foot and a half long, and two broad where it was biggest; though I have since seen some larger. The eyes of this animal, are by no means proportionable to the size of its body; being round, and but of three lines diameter; and the hole of its ears is yet smaller,

smaller, seeming only like that made by a pin. Some have thought this fish peculiar to the river of *Amazons*; but it is no less common in that of *Oroonoko*. It is also found, though not so frequently, in that of *Oyapoc*, and divers others, in the neighbourhood of *Cayenne*, and on the coasts of *Guiana*, and probably elsewhere. It is the same that is called *Lamentin* at *Cayenne*, and the *French American* Islands; only, I believe, there may be some small difference in the kind. It is never found in open sea, and very seldom near the mouths of rivers; but it is met with above a thousand leagues from the sea, in most of the rivers that fall into the *Amazon*, as the *Guallega*, *Pastaga*, &c. It is only stopp'd in the *Amazon* by the *Pongo* of *Borja*, whereof we have spoken above; but this is no hindrance to another fish, as small as that is large, called *Mixano*, several whereof are not so long as a finger. They come every year, in shoals, to *Borja*, towards the latter end of *June*, when the river begins to fall; but they are not remarkable for any thing, except the strength with which they swim up against the stream. As the narrow channel of the river, necessarily draws them together near that pass, one may see them cross over, in great companies, from one side to the other, and alternatively surmount, under one shore or the other, the extraordinary rapidity and violence, wherewith the waters force their way, through this strait pass. They catch them with the hand, when the river is low, in the cavities of the rocks of *Pongo*; where they rest to recover their strength, and whereof they make use, as of steps, to get up the stream.

I saw, in the neighbourhood of *Para*, a sort of *Lamprey*, whose body, like that of the common *Lamprey*,

*Lamprey*, has a number of holes therein; but it has also the same property, as the *Torpedo*; whoever touches it with the hand, or even with a stick, being immediately affected, with a painful numbness in the arm; nay, sometimes, they say, this numbness is so great, as wholly to take away the use of the limbs; so that, no longer being able to support the body, it falls to the ground; but, of this last fact I never was a witness. *Mons. de Reaumur* has discover'd the secret, of that hidden spring, in the *Torpedo*, which produces this surprizing effect\*.

The tortoises, or turtles, of the *Amazon*, are much sought after at *Cayenne*, as more delicious than any others. They have them in that river of divers sizes and kinds; and in such vast plenty, that they alone, with their eggs, would be sufficient to support all the people that live upon its banks. There are also some land-tortoises, call'd *Jabutis* in the *Brazilian* tongue, which they prefer, at *Para*, to any of the others; all of which may be kept out of water, and especially these last, for several months, without any sensible nourishment.

Nature seems to have favour'd the general propensity of the *Indians* to laziness, by preventing their necessities: The lakes and marshes, which are to be met, at every step, on the sides of the *Amazon*, and sometimes a good way up within the land, are fill'd with all sorts of fish, at the seasons when the river overflows its banks; and when the waters fall away, they remain inclosed therein, as in natural ponds or *Reservoirs*, where they catch them with all the ease imaginable.

Not

\* See the *Memoirs* of the *Academy* in 1714.

Not only so, but in the province of *Quito*, and in the various countries thro' which the *Amazon* passes, as also at *Para* and *Cayenne*, there are many sorts of plants, very different from those known by us in *Europe*, whose leaves and roots, being thrown into the water, have the property of intoxicating the fish; in which condition they float upon the surface, and may be taken up with the hand. In effect, the *Indians*, by the means of these plants, and of the pallisades, wherewith they bar up the mouths of the lesser rivers, can catch as many fish as they please! This done, they smoke-dry them upon hurdles, in order to keep them; for which purpose they very seldom use salt, tho' those of *Maynas*, get a sort of fossil-salt, out of a mountain adjoining to the banks of the *Guallaga*; and those, under the dominion of *Portugal*, have it from *Para*, whither it is brought out of *Europe*.

*Crocodiles*, or rather *Alligators*, which are of the same nature, are very common throughout the whole course of the *Amazon*, and even of most of the rivers that fall therein. One may sometimes see them twenty foot long; and perhaps, there may be those which are yet more: I had already beheld a great many on the river of *Gua-yaquil*. They will lie whole hours, and even whole days, upon the mud, stretch'd out in the sun, and motionless; so that one not used to them, would take them, for trunks of trees, or long pieces of timber, cover'd with a rough and dry bark. As those on the banks of the *Amazon* are less sought after and hunted, than in other places, they are not much afraid of men; so that, in the time of the inundations, they sometimes enter the cottages of the *Indians*; and there are more examples than one, of this fierce animal's

mal's having taken a man out of a canoo, even within sight of his companions, and having devoured him, without its being in their power to help him.

The most dangerous enemy of the *crocodile*, and perhaps the only one, that dares engage with him, is the *tyger*; and indeed, to behold them in combat with each other, must be a curious sight; but it can only be the effect of a fortunate chance; the account given thereof, by the *Indians*, is as follows: The *crocodile* raises his head above water, to seize the *tyger*, when he comes to the river-side to drink, as he does, on the like occasions, by oxen, horses, mules, and, in short, every thing that happens in his way. Hereupon the *tyger*, plunges his claws into the *crocodile's* eyes, the only part where he can hurt him, by reason of the hardness of his scales; and the latter, diving under the water, drags the *tyger* along with him, who will sooner drown than let go his hold. The *tygers* I have seen in *America*, and which are very common in all the hot and woody countries, have not seem'd to me to fall short, either in size or beauty, of those of *Africa*: There is one sort of them, whose skin is only brown, without being spotted. The *Indians* are very dexterous at engaging these beasts, with the spontoon, or half pike, their usual weapon on a journey.

I never met on the banks of the *Amazon*, nor indeed any-where, but in the province of *Quito*, with the animal, call'd, by the *Indians* of *Peru*, in their tongue, *puma*, and by the *Spaniards* of *America*, a *lion*. I know not whether it deserves this name, the male having no main, and being much smaller than those of *Africa*: I did not see it alive, but stuff'd with straw.

It would not be at all strange, that *bears*, which only settle in cold countries, and are to be found on several mountains in *Peru*, should not be to be seen in the woods of the *Maranon*, whose climate is so very different; nevertheless, I there heard talk of an animal call'd *ucumari*, which is exactly the name of a *bear* in the *Peruvian* tongue; but I had not an opportunity, of satisfying myself, whether the creature was the same.

The *elk*, which is found in some woody parts of the *cordeliers* of *Quito*, is neither uncommon in the forests of the *Amazon*, nor in those of *Guiana*: I give here the name of *elk*, to the animal, call'd by the *Spaniards* and *Portuguezs*, *danta*, and in the *Peruvian* tongue, *uagra*; tho' it is term'd in that of *Brazil*, *tapijra*, and in that of *Galibi*, on the coasts of *Guiana*, *maypouri*. As the main land, adjacent to the isle of *Cayenne*, is part of that vast continent, through which the *Amazon* passes, and is contiguous to the countries water'd by that river, most of the same animals are to be found in all those regions.

On my passing by the *Yameos*, I took a draught of a sort of *weazel*, that is easily made familiar, but I could neither pronounce, nor write the name whereby they call'd it: I met the same again in the neighbourhood of *Para*, where it is term'd *coati*, in the *Brazilian* tongue; it is mentioned by *Laet*.

The most common game, and that which is most in request, amongst the *Indians*, on the banks of the *Amazon*, is the *ape*, or *Monkey*: In effect, throughout my navigation down that river, I saw so many of those animals, and heard talk of so many various kinds thereof, that only to reckon them up would require some time. Some

of them are as large as grey-hounds, some again as small as rats; I speak not of those known under the names of *sapajous*, but of others yet less, and difficult to be tamed, whose hair is long, and bright, generally of a chestnut-colour, and sometimes spotted with a sort of yellow. Their tails are twice as long as their bodies; their heads small and square; their ears sharp and prominent, like those of dogs and cats, and not like other apes or monkies, whom they resemble very little, having more the air and look of a little lyon: They are called *pinches*, at *Maynas*, and *tamarins*, at *Cayenne*. I have had several of them, but could not keep any alive; they are of that sort called *fabuins* in the *Brazilian* tongue; and in *French*, by corruption, *sagouins*; *Laet* has made mention of them, and cites *L'Ecluse* and *Lery* upon that head. The governor of *Para* presented me with one, which was the only one of its kind ever seen in the country; the hair of its body being as bright as silver, and of the colour of the finest fair tresses, whilst its tail was of a shining chestnut, inclining to black. It had still another singularity yet more remarkable; its ears, sides of the face, and nose, were of such a lively red, one could scarce be induced to believe it was its natural colour. I kept it a year, and it was yet living, when I was writing this, almost in sight of the coasts of *France*, where I pleased myself with the thought of bringing it alive. But, in spite of the continual precautions I took, to preserve it from the cold, the severity of the weather killed it in all probability. As I had no convenience, aboard of ship, to put it to be dry'd in a slack oven, as *Monf. Reaumur* contrived for the keeping of his birds, all, I could do, was, to preserve it in brandy, which, perhaps, may be

sufficient, to shew I have not exaggerated in this Description.

There are, besides, divers other uncommon creatures, but which have most of them been described, and may be found in several parts of *America*; such as various kinds of wild boars, and rabbits; also the *pac*, the *fourmilier*, the *porcupine*, the *slow*, the *taton*, or *armadillo*, with many others, of some whereof I have taken draughts, or whereof the draughts, taken by *Monf. de Morainville*, were left in the hands of *Monf. Godin*.

It is not at all surprizing, that in climates so hot, and so moist, as those whereof we have been treating, serpents and snakes of every kind should abound. I have read, in I know not what author, that none of those on the banks of the *Amazon* are venomous; and, indeed, it is certain, that some of them are by no means mischievous; but, it is also certain, the bites of some of them seldom fail of being mortal. Of this kind, the most dangerous, is the *rattle-snake*, which is sufficiently known. Of the same nature also is the serpent call'd *coral*, remarkable for the variety and liveliness of its colours; but the most uncommon, and singular of all, is a large amphibious serpent, between twenty-five and thirty foot long, and above a foot over, as is affirmed, which the *Indians* of the province of *Maynas* call *yacu mama*, or *mother of the water*, and which, they say, lies generally in those great lakes, formed within the land, by the inundations of the river. Of this creature they relate such strange stories, that I should still be in some doubt of their truth, even tho' I were to fancy I had seen them; and which I would not venture to repeat here, but after the late author, already cited, of the *Oroonoko illustrated*, who relates them very seriously. This monstrous snake, according

According to the account of the *Indians*, not only swallows up a whole buck, but, as they assert, draws towards it, irresistibly, by its breath, all the animals that approach it, and devours them. Many *Portugueze*, at *Para*, attempted to persuade me, of things almost as improbable, concerning the manner, whereby another large snake, kills men with its tail. I suspect it to be of the same kind, as is found in the woods of *Cayenne*; where the only thing wonderful, relating thereto, may be reduced to one single fact, confirmed by experience, namely, that one may be bitten thereby, and carry the marks of it, without any danger; tho' its teeth of a size, are very fit to inspire any one with terror: I have brought two of their skins with me, one of which is scarce less than fifteen foot long, quite dry'd as it is, and above a foot broad; nay, undoubtedly, there are some yet bigger. For these skins, and divers other curiosities relating to natural history, I am indebted to the jesuits of *Cayenne*, *Mons. de L'Isle-Adam*, commissary of the marine; *Mons. Arthur*, physician to the king; and several officers of the garrison.

The worm, call'd by the *Maynas*, *suglacuru*, and at *Cayenne*, *macaque*, grows, and is nourished within the flesh both of men and animals; there it remains till it comes to the bigness of a bean, and causes an intolerable pain; but it is not very common. I took a draught of the only one I ever saw, at *Cayenne*, and have kept the worm itself in spirit of wine; they say, it is bred in the wound made by the sting of a *mosquito*, or *maringoin*, but hitherto the animal that lays the egg was never yet discover'd.

The Bats, which suck the blood of horses, mules, and even men themselves, when they don't secure themselves from them, by sleeping under

under a tent, are a nuisance, common to most of the hot countries in *America*; and some of them are of a monstrous bigness: At *Borja*, and in divers other places, they have entirely destroyed the great cattle, which the missionaries had introduced there, and which began to multiply in those parts.

The number of birds, of different kinds, that are found in the forests of *Maranon*, seems even to surpass that of four-footed beasts; it is observed, however, that hardly one of them has any agreeable note, so, it is chiefly, for the lustre and variety of the colours of their plumage, they are taken notice of, and valued. Nothing comes up to the beauty of the feathers of the *colibri*, whereof many authors have made mention, and which is frequent in *America*, throughout the whole *torrid zone*. All the remark I shall make thereon is, that tho' it is generally reckoned to be only in hot climates, I never saw them in a greater number than in the gardens of *Quito*, whose temperate climate borders rather upon cold than excessive heat: Neither is the *toucan*, whose red and yellow beak is monstrous, in proportion to its body, and whose tongue, which resembles a fine pen, is reckon'd to be endued with singular virtues, peculiar to the countries whereof I speak. The various kinds of *parrots* also, and *aras*, different in size, colour, and figure, are not to be number'd; the most uncommon of the *parrots*, are those which are entirely yellow, with a little green at the extremity of their wings: I only saw two of this kind at *Para*. They are quite strangers there to the grey sort, the tips of whose wings are of a flame-colour, and which is so common in *Guinea*.

The *Maynas*, *Omaguas*, and divers other *Indians*, make some works in feathers; but they neither come up to the art, nor the neatness of those of the *Mexicans*.

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The *Indians*, on the banks of the *Oyapoc*, have found the way artificially to ingraft, if we may so call it, a new plumage upon their *parrots*, of natural colours, tho' different from those they had originally received from nature: This they do by pulling some of their feathers, and rubbing the part with the blood of certain frogs, which is call'd at *Cayenne*, ornamenting a *parrot*. Perhaps, the whole secret consists in bathing the part pull'd with some sharp liquor; or, perhaps, there is no need of any preparation, and it is an experiment yet to be made. In effect, it does not seem a whit more extraordinary, to see red or yellow feathers grow upon a bird, instead of green that have been pluck'd from it, than to see white hairs grow upon the back of a horse that has been hurt, in the room of black which were there before.

Amongst several very singular birds, I beheld one at *Para*, as large as a goose, whose plumage is not at all remarkable; but then the tops of its wings were arm'd with a spur, or very sharp horn, like a large prickle, half an inch long. It has, besides, upon its bill, another small and flexible horn, of the length of a finger; it is call'd *cabuitabu*, in the *Brazilian* tongue, from a word coin'd in imitation of its note.

The bird called *trompetero*, by the *Spaniards* in the province of *Maynas*, is the same that is named *agami* at *Para* and *Cayenne*. It is very easily familiarized, and is not remarkable for any thing, but the noise it makes sometimes, whence they have given it the name of the *trumpet-bird*. It is entirely without any grounds, that some have taken this noise for its song, or natural note; for it appears to be formed in, and to issue from, an organ, directly opposite to the throat.

The

The famous bird, called at *Peru contur*, and by corruption *condor*, which I have seen, in several parts of the mountains of the province of *Quito*, is also to be found, if what I have been assured is true, in the low countries, on the sides of the *Maranon*. I have observed them hovering over a flock of sheep, and it is very probable, nothing but the sight of the shepherds prevented their attempting somewhat; it being an opinion universally received, that this bird will carry off a buck, and has sometimes prey'd upon a child. It is even pretended, that the *Indians* hold out to it, as a lure, the figure of a child, made of a very glutinous clay, upon which it descends with an excessive rapidity, and strikes its pounces into it so deep, that it can never after get away.

On the 19th of *September*, almost four months after my departure from *Cuença*, I arrived within sight of *Para*, called by the *Portuguese* the *Grand Para*, that is the *Great River*, in the language of *Brazil*. We landed at a house dependent on the college of *Jesuits*, where we were received by the provincial, the reverend father *Don Joseph de Souza*; and where the rector, the reverend father *Don Juan Ferreyra* detain'd us eight days; procuring us all the amusements the country afforded, whilst a lodging was preparing for us in the city. On arriving at *Para*, on the 27th, we found there a convenient house, richly furnish'd, with a garden, from whence we might have a full view of the sea, and exactly situated as I had desired it, for the convenience of my observations. The governor and captain-general of the province gave us such a reception, as we might very well have expected, by the orders he had issued concerning us, to the commandants of the fortresses in our way, as well as by his commendations

commendations to the provincials of the different missionaries, with whom we had met.

In effect, on coming to this place, immediately after our leaving the woods of the *Amazon*, we could almost have fancied ourselves transported to *Europe*: We found ourselves in a large city, adorned with streets finely laid out, and handsome houses; most of them rebuilt within these thirty years, of stone and shards, as also magnificent churches.

The direct intercourse between *Para* and *Lisbon*, from whence there comes every year a fleet of merchantmen, affords those, who are well to pass, an easy means of supplying themselves with all conveniences. They receive *European* goods in exchange for the product of the country; which, besides some gold-dust brought from the inland parts towards *Brazil*, consists of all the various useful commodities, that the regions bordering on those rivers, which fall into the *Amazon*, or on the sides of the *Amazon* itself, can yield. Such as the bark of the *cubiri*, or clove-tree; the *sarsaparilla*, the vanilloes, sugar, coffee, and above all, the *cacao*, which is the current money of the country, and what chiefly conduces to the riches of the inhabitants.

The latitude of *Para*, in all probability, had never been observed by land; accordingly, they assured me, on my coming thither, that I was exactly under the equinoctial line. The map of father *Fritz* places this city in one degree of *south* latitude; but I found it, by several observations that agreed together, to be one degree, twenty-eight minutes; which does not differ sensibly from *Laeli's* Map, tho' it was never follow'd, as I know, by any of the geographers who came after him. In the new *Portuguese* directory, or

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road-book, *Para* is placed in one degree, forty minutes. As to its longitude, I am provided with materials for settling it precisely, by the eclipse of the moon I observed there, *November 1, 1743*, and by two immersions of the first of *Jupiter's satellites*, on the 6th, and 29th of *December* following. Till I can obtain some observations conformable thereto, from some place whose longitude is well known, not having met with any at *Paris*, I judge, by calculation, the difference between the meridian of *Para*, and that of *Paris*, to be about three hours, twenty-four minutes to the *west*: I pass here in silence over my observations upon the declination and inclination of the needle, as well as those upon the tides, which are pretty irregular at *Para*.

An observation of more importance, and more immediately relating to the figure of the earth, the chief end of our voyage, was that concerning the length of the pendulum of mean time, or rather, the difference of this length at *Quito*, and at *Para*; one of these cities being on the sea-side, and the other between fourteen and fifteen hundred fathoms above the level of the ocean, and both of them under the equinoctial line; for a degree and half here is of no consequence. I was enabled to observe this difference, by the help of an invariable pendulum, twenty-eight inches long, which I shall describe elsewhere; which keeps its vibrations sensibly for above twenty-four hours; and wherewith I have made a great number of experiments at *Quito*, and on the mountain *Pichincha*, seven hundred and fifty fathoms above *Quito*. By the mean result, of the nine experiments made at *Para*, the two most widely distant of which gave but the difference of three vibrations in 98740, I found  
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my pendulum made at *Para*, in twenty-four hours mean time, thirty-one or thirty-two vibrations more than at *Quito*, and fifty or fifty-one more than at *Pichincha*. From which experiments I conclude, that under the equator, two bodies, one whereof should weigh sixteen hundred pounds, and the other a thousand, when on a level with the sea, being carried, the former to 1450, and the latter to 2200 fathoms height, would each of them lose above a pound of their weight; just as the same ought to happen, were the same experiments made under the 22d and 28th parallel, according to Sir *Isaac Newton's* table, or towards the 20th and 25th, to judge by comparing the experiments, made immediately under the equator, in divers parts of *Europe*. The former numbers are only pretty near the matter; and I reserve to myself the liberty, to make some small alterations therein, by applying thereto the proper equations, when I give a particular account of my experiments relating to the pendulum.

During my stay at *Para*, I made two or three little trips, in a canoo to the places circumjacent; and I took advantage thereof, for the improvement of my map. I could not compleat it, however, without having a view of the real Mouth of the *Amazon*, and coasting along its north-side to the north-cape, where its course ends. This reason, together with divers others, having determin'd me to go from *Para* to *Cayenne*, from whence I might proceed directly to *France*, in the man of war that was expected there, I would not, like *Monf. Maldonado*, take advantage of the opportunity, of going in the *Portugueze Fleet*, which set out for *Lisbon*, December 3, 1743: I was, therefore,

detained at *Para* till the end of the same month, though not so much by their threatening me with contrary winds, which reign at that season, as by the difficulty of procuring a set of rowers; the small-pox, which then made great havock there, having put to flight most of the *Indians* of the villages round about.

It has been observed at *Para*, that this disease is yet more fatal to the *Indians* of the missions, newly drawn out of their woods, who go naked, than to those who wear cloaths, and who were born, or have lived long amongst the *Portuguese*. The first, who are a kind of amphibious creatures, almost as often in the water as on land, and inured from their infancy to the inclemencies of the weather, may, perhaps, have their skins more condensed than those of other men; and one might be induced to think this single circumstance alone, might render the eruption of the pock more difficult in them. And the custom these same *Indians* have of anointing their bodies with *roucou*, *genipa*, and divers other thick and fat oils, which close up the pores, and must at last obstruct the perspiration, may, perhaps, contribute to increase this difficulty. This conjecture is confirm'd, in some measure, by another remark; namely, that the negro-slaves, newly transported from *Africa*, who have not the same custom, withstand this distemper better than the natives of the country. However, be the case as it will, a savage *Indian*, newly come from the woods, if attack'd by this disease, is generally a dead man: But, wherefore is it not the same with the artificial small pox? Fifteen, or sixteen years ago, a *Carmelite* missionary, in the neighbourhood of *Para*, seeing all his *Indians* die, one after another, and having learn'd from a news-paper the secret of *inoculation*,

tion, which then made a great noise in *Europe*, prudently judg'd, that, by using this remedy, he might, at least, render that death doubtful, which was but too certain, in having recourse only to the common remedies. An inference so plain could not fail of arising in the minds of all those who were capable of reflection; this friar, however, was the first, who had the courage to try the experiment in *America*. He had already lost half his *Indians*; many others were taken ill daily; he ventur'd, therefore, to inoculate the pock on all those who had not yet had that distemper, and did not lose one of them: Whereupon another missionary of *Rio Negro* follow'd his example, and with equal success.

After such convincing and authentick proofs, it will, undoubtedly, be judg'd, that in the contagion of 1743, which caused my detention at *Para*, all, who had any *Indian* slaves, had recourse to so salutary a remedy for their preservation. I should have thought the same myself, had I not been a witness to the contrary; at least, no one as yet had any such design, when I left that place: It is true half the *Indians* were not then dead.

On *December* 29, I embark'd at *Para* for *Cayenne*, in a canoo belonging to the general, with twenty-two rowers, and all the conveniences I could desire; being well provided with refreshments, and furnish'd with recommendations to the *Franciscans* of the reform of *St. Antonio*, who have their missions in the island of *Marajo* or *Joannes*; and who were to supply me with a new set of *Indians*, as I pass'd by, to continue my voyage. Nevertheless, the want of a correspondence between *Para* and *Cayenne*, with divers other accidents, prevented my finding a good  
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experienced pilot, in four villages of these fathers, where I landed the beginning of *January*, 1744. Being deprived of this assistance, and subject to the little experience and timidity of my *Indian* rowers, and above all, to that of the *Portuguese Mammelus* or *Metis* \*, who was given me to command them in their own tongue, and had taken it into his head, that I was likewise to be under his orders, I was detained two months upon a voyage, which I might have perform'd in less than a fortnight; and this delay prevented my observing by land the comet that appeared about that time: It was lost in the rays of the sun, before I could reach *Cayenne*.

Some leagues below *Para*, I cross'd the eastern mouth of the *Amazon*, or the branch of *Para*, separated from the main stream, or the western mouth, by the large island known by the name of *Joannes*, or more commonly, at *Para*, by that of *Marajo*. This island alone takes up almost the whole space that parts the two mouths of this river; it is of an irregular figure, and above a hundred and fifty leagues round. In all the maps they have substituted instead thereof a multitude of small islands, which would seem as placed there at a venture, if they did not appear to be copy'd in the Map called *the Light of the sea*, which, in this part, is full of accounts, as false as they are particular. The branch of *Para*, at the place where I cross'd it, five or six leagues below the city, was already above three leagues over, and continued to grow wider and wider. I coasted along the island, steering to the north, for thirty leagues, to its last point called *Maguari*; beyond which I turned

\* *Mammelus*, is the name given, in *Brazil*, to the children of the *Portuguese*, begotten upon *Indian* women.

turned to the *west*, keeping still along the coast of the island, which runs above forty leagues, and hardly deviates from the equinoctial line: I pass'd also within sight of two large islands, which I left towards the *north*, one call'd *Machiane*, and the other *Caviana*, both at present deserted, but formerly inhabited by the nation of the *Arouas*, who, though dispersed in divers parts, have still retain'd their own particular tongue. The soil of both these islands, and also of great part of *Marajo*, is entirely drowned, and almost uninhabitable. I quitted the coast of *Marajo*, where it inclines back to the *south*, and fell again into the true channel, or main stream of the *Amazon*, over-against the new fort of *Macapa*, situated on the *western* side of that river, and removed by the *Portuguese* two leagues to the *north* of the old one. It would be impossible, in this place, to cross the river in ordinary canoos, if the channel were not divided into several, by the intervention of small islands, under shelter whereof they go in greater safety, by watching their time to pass from the one to the other; notwithstanding which, it is still above two leagues from the last island to *Macapa*. In this last passage, I cross'd again, and for the last time, the equinoctial line; which I had approach'd insensibly from the place of my embarkation; for, on the 18th and 19th of *January*, I observed, at the new fort of *Macapa*, or rather, on the ground designed for building the new fort, three minutes *north* latitude.

The ground of *Macapa* is raised two or three fathoms above the level of the water, and only the side of the river, is cover'd with trees; the country, up higher within the land, being quite open, and level; the first I had met with of that kind, since my leaving the *Cordeliers* of *Quito*.  
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The *Indians* affirm, it continues the same as one goes *northward*; so that one may ride from thence to the sources of the *Oyapoc*, through vast open plains, only separated here and there, by little clusters of straggling trees. From the neighbourhood of the sources of *Oyapoc*, one may see towards the *north*, the mountains of the *Aprouague*, which may also be discover'd very distinctly, in open sea, at many leagues distance from the coasts; how much easier then may they be seen from the neighbouring heights of *Cayenne*? All this being supposed, it is evident, that on setting out from *Cayenne*, in five degrees of *north* latitude, and travelling towards the *south*, we might conveniently have measured two, three, and perhaps four degrees of *Meridian*, without going out of the *French* territories; and we might, besides, have discover'd, by the way, the inland countries, whereof we never yet had any tolerable account. In short, had it been thought proper, with the passports of *Portugal*, the measure might have been carried on, to the parallel of *Macapa*, that is, to the equator itself. The execution of this scheme would have been more easy, than I believed it myself, when I propos'd it to the academy, a year before the voyage to *Quito*, (where it was supposed we should meet with less difficulty,) was thought of. Had my notion been approved of, it is very probable we should have been at home many years before; but it was only by an actual survey of the places themselves, we could be sure what I propos'd was practicable.

Between *Macapa* and the *north* cape, in that part, where the main stream is the most confined, by the intervention of islands, and above all, over-against the largest mouth of the *Arawari*, which enters the *Amazon* on the *north* side, the tide of flood exhibits an extraordinary phenomenon

*Phenomenon.* During the three neareſt days, to the full and new moons, the ſeaſon of the ſpring-tides, the ſea, inſtead of flowing near ſix hours, as at other times, riſes to its greateſt height in a minute or two; but, it may well be imagined, this cannot happen quietly. One may hear, at the diſtance of a league or two, a dreadful noiſe, which gives notice of the approach of the *Pororoca*, the name aſſigned by the *Indians* of thoſe parts, to this terrible torrent. In proportion as it draws nearer, the noiſe grows ſtill greater, and, in a ſhort time, one may ſee a liquid promontory, between twelve and fifteen foot in height, advance forwards; this is followed by a ſecond, and that by a third, and ſometimes a fourth, upon the heels of each other, which take up the whole breadth of the channel. This prodigious maſs, of accumulated waters, ruſhing forwards with inexpressible rapidity, breaks down, and carries before it, every thing that reſiſts it; ſo that I have ſeen, in ſome places, a large ſpot of earth torn away, with large trees rooted up, and ravages of all kinds, the aſtoniſhing effects of this *Pororoca*. Wherever it comes, it clears all the ſhore, as if it had been carefully ſwept; the canoes, pirogues, and even the barks, have no other means of ſecuring themſelves, from the fury of this *Barre*, (that is the name given it by the *French* at *Cayenne*) but by caſting anchor, in a place, where there is a great depth of water. I ſhall not enter here, into a more particular account of this matter, nor of its explanation; I will only point out the cauſes thereof, by ſaying, that after having viewed it attentively, in diſverſe places, I always obſerved, that this did not happen, but when the rapid ſpring-tide, being engaged, and pent up, within a narrow channel, met with ſome ſand-bank, or ſhell, in the way, which obſtructed

its passage. That there, and no where else, began this impetuous, and irregular motion of the waters; which ceased again, a little beyond the bank, when the channel once more grew deep, or considerably wider. They say, somewhat of the same nature happens, at the islands of *Orkney*, on the *north* of *Scotland*, and at the mouth of the *Garonne*, in the neighbourhood of *Bourdeaux*, where they call this effect of the tides, the *Mascaret*.

The fear of the chief of my *Indians*, that we should not be able, in the five days, which still remained, before the spring-tides of the full moon, to reach the *north* cape, from which we were now but fifteen leagues, and beyond which we might have found a creek, made them resolve, in spite of my remonstrances, to wait nine whole days, in a desert island, till the full moon was well over; and we got from thence to the *north* cape, in less than two days. The next morning, when it was entered into the last quarter, and we had consequently neap-tides, we ran foul of a shoal of mud; and the sea then ebbing, retired a good distance from us. Next day, the flood did not come so far as the canoe, and, in short, I remained there a-ground, almost a week, during which, my rowers, being no longer able to use their oars, had no other employment, than to wade a good way, up to the middle in mud, in quest of some brackish water, to quench their thirst. As for my part, I had all the time needful, to repeat my observations, within sight of the *north* cape; and to be heartily tired, with finding myself, all the while, in one degree fifty-one minutes *north* latitude. My canoe, which had sunk deep into a hardened slime, was now become a solid observatory; and I found there, the variation of the compass, of four degrees *north-east*, to be two degrees and a half less, than at *Pauxis*;

*Pauxis*; in short, I had also time enough, during a whole week, to cast my eyes all around, without being able to discover any thing, but *Mangliers*, instead of those high mountains, whose summits are described with great exactness, in the account of the coasts, annexed to the maps of the *Light of the Sea*, a book, that has been translated into all languages, and which seems, in this part, as if made rather to mislead, than to direct sailors. At last, at the spring-tides of the new moon, the beginning of that very *Pororoca*, so much dreaded, set us again afloat, though not without great danger; having not only raised up the canoe, but making it plough through the mud, with greater velocity, than I had experienced in the rapid current, of the famous *Pongo*; towards the upper part of that river, I had so lately run down, as far as it was navigable, and the mouth whereof I now at last beheld. Accordingly, my map of the course of the *Amazon* ended here; nevertheless, I continued to take a draught of the coasts, and observe the latitudes as far as *Cayenne*.

Some leagues to the west of this *Seven Day Shoal*, and in the same latitude, I met with another mouth of the *Arawari*, now choaked up with sands. This mouth, with the deep and wide channel, that leads to it, as one comes from the north, between the main land of the north cape, and the islands that cover the cape, are the river and bay of *Vincent Pinço*. The Portuguese of *Para*, had their own reasons, for confounding it with the river *Oyapoc*, whose mouth under *Cape Orange*, is in four degrees fifteen minutes, north latitude. The article of the treaty of *Utrecht*, which seems to make the *Oyapoc*, and the river of *Vincent Pinço*, but one and the same river, does not hinder them, from being actually above fifty leagues distant

distant from each other. This point will not be contested, by any one of those, who have consulted the old maps, and perused the original authors, who wrote concerning *America*, before the establishment of the *Portuguese* in *Brazil*. On *February* 23<sup>d</sup> and 24<sup>th</sup>, I observed, at the *French* fort of *Oyapoc*, three degrees fifty-five minutes, *north* latitude; this fort, lies six leagues up the river, upon the *north* side.

At length, after two months navigation, by sea, and by land, I speak without exaggeration, (since the coast is so flat between the *north* cape and *Cayenne*, that the helm continually touched, or, rather, did not cease to drag in the mud, there not being, sometimes, a foot of water, at half a league's distance from shore,) I arrived, on *February* 26<sup>th</sup>, 1744, from *Para*, at *Cayenne*.

Every one knows, it was in this island, that *M. Richer*, of this academy, discovered the Inequality of Gravity, or weight, under different parallels, in 1672; and that his experiments, upon this head, were the first foundation of the theories of *Sir Isaac Newton*, and *M. Huygens*, concerning the Figure of the Earth. One of the reasons, which had determined me to go to *Cayenne*, was the great usefulness of repeating the same experiments, whereto we had been very much accustomed, and which are now made with far greater exactness than heretofore. I have brought with me a steel rule, which, according to my observations, is the exact measure, of the absolute length of the simple pendulum at *Cayenne*; but I expect a much greater exactness, from a comparison, of the number of vibrations, made by my pendulum, when fixed at *Cayenne*, in twenty-four hours, with the number of its vibrations in equal time at *Paris*, as soon as I can try it. This comparison, will give very exactly

exactly, the excess of the pendulum of seconds at *Cayenne*, above the pendulum of seconds at *Paris*; whose absolute length, determined by *M. Mairan*, who has surpassed all those, that went before him, in this enquiry, may justly be deemed the true standard. One may also take for a fixed rule, the length of the pendulum observed at *Quito*, by various methods, and with diverse instruments, about which *Messieurs Godin, Bouguer*, and myself, are agreed, almost to the hundredth part of a line. From whatever place one sets out, the difference of the number of vibrations, of the same pendulum, in twenty-four hours, at *Quito, Para*, and *Paris*, taken from a long series of experiments in each city, will give the absolute length of the equinoctial pendulum, on the same level with the sea, the most proper of all others, to become, by common consent, an *universal measure*. How much were it to be wished, there were one, generally received as such, at least, amongst the mathematicians! In effect, does not the difference of tongues, an inconvenience, which will still continue many ages, sufficiently obstruct the progress of the arts and sciences of itself, by the want of a sufficient mutual and settled correspondence between the learned of the several nations, without adding other obstacles thereto, designedly, if we may so say, by affecting to make use of different weights and measures, in every country and place; when nature offers us, in the length of the pendulum of seconds, under the equator, an invariable standard, admirably calculated, to ascertain the size of weights and measures, in every place, and which courts all philosophers to make use thereof?

My first care, in arriving at *Cayenne*, was to distribute amongst diverse persons some seeds of *Quinquina*, which had been gathered then but  
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eight months. Thereby I hoped to repair the loss, of the young plants of the same tree, the last whereof, which my singular precaution had preserved till then, from the heats, and other accidents of my voyage, had been carried away just before, by a gust of wind, which was very near sinking my canoe, near *Cape Orange*. The seeds, however, would not grow at *Cayenne*, neither, indeed, durst I flatter myself with the expectation, considering their tenderness, and that they had been exposed to great heats. I have not yet had any account of those, which I had transmitted to the *Jesuit* missionaries, towards the head of the *Oyapoc*; whose mountainous soil, and less sultry climate, much more resembles that of *Loxa*, where I had gathered them.

I observed, at *Cayenne*, the same latitude as *M. Richer*, of about five degrees fifty-six minutes north; and I was, at first, surprized to find, by four observations, of the first of *Jupiter's Satellites*, which agreed with each other, that the difference of the meridians, between *Cayenne* and *Paris*, was about a degree less than it was set down, in the book of *The Knowledge of the Times*. But I have since been informed, that *M. Richer* did not make any observation, of the *Satellites* of *Jupiter*, at *Cayenne*; and that the longitude of that place, had only been deduced from his other observations, by a very indirect method, and that much subject to error. A more particular account thereof, is only proper for our private assemblies; no more than that of my observations of the tides, and of the declination and inclination of the needle, made on the same spot.

Having observed that, from *Cayenne*, one might very plainly discern the mountains of *Courou*, reckoned to be ten leagues distant from thence, I judged

judged that place, from which one might see the fire, and hear the report, of the cannon of the fort at *Cayenne*, would be very proper, to measure the velocity of sound, in a climate so different from that of *Quito*, where we had often tried the same experiment. Hereupon, M. *D'Orvilliers*, commandant of the fort, was not only willing to give the necessary orders, but took a pleasure in sharing the trouble with me. M. *Fresneau* also, engineer to the king, undertook to make the necessary signals of advice, as likewise to measure the velocity of the wind, on his side, with many other particulars. Of five experiments, made two different days, four whereof agree within half a second, in an interval of an hundred and ten seconds of time, the distance was geometrically concluded, to be 20230 fathoms, by a chain of triangles, joined to a basis of 1900 fathoms, actually twice measured, on a level ground: and the mean result, (after a deduction made of the velocity of the wind,) gave me, for the velocity of sound, 183 fathoms and a half each second, instead of 175, which we had observed at *Quito*. The piece of cannon, that served for these experiments, was a twelve-pounder.

I took advantage here, of the angles I had already measured, and of known distances, to determine geometrically, the situation of thirty or forty points, both in the island of *Cayenne*, and on the main land, and the coasts; amongst the rest, of some rocks, especially of that called the *Constable*, which serves as a directory, or guide, for vessels: I took also the angles of elevation, of the most remarkable capes and mountains. Their height, once well known, would afford the pilots, a much more certain way, than that of reckoning by the log, to know by the sight of land, without calculation, and by the help of a plain table, how far they are distant

distant from the coasts. It is well known, of how much importance it is, to be apprized of this exactly, in approaching land. This is not the only assistance geometry offers to mariners, whereof they have hitherto neglected to make use of.

In another trip I took, with M. *D'Orvilliers*, out of the island, on going up some rivers of the continent, we measured their windings, by courses and distances; besides which, I observed some latitudes; these are so many materials, which, with the principal points, that I had already determined, might serve to make an exact map of this colony, whereof we have not, as yet, any one, which deserves that name.

During my stay at *Cayenne*, I had the curiosity, to try if the venom of the poisoned arrows, which I had already kept above a year, would retain its strength; as also, whether sugar was actually as effectual an antidote for it, as I had been assured. Both these experiments, were made in the presence of the commandant of the colony, with diverse officers of the garrison, and the king's physician. A fowl, slightly wounded, by an arrow blown out of a trunk, whose point had been dipt in the poison, at least thirteen months, lived half a quarter of an hour; another, being pricked in the wing, by one of these same arrows, newly dipt in the poison, diluted with water, and instantly drawn out of the wound, seemed to grow heavy within a minute, soon after convulsions followed, and though sugar was given it, it died; a third, being pricked with the same arrow, dipt afresh in the poison, having been instantly relieved with the same remedy, did not shew any sign of being out of order. I likewise repeated the same experiments at *Leyden*, in the presence of many cele-

celebrated professors of that university \*, *January* 23d, 1745; and the poison, whose strength must have been abated, by the length of time, and the cold, did not produce its effect, till after five or six minutes, but the sugar was given without any success; the fowl, that took it, seeming only to live a little longer than the other: The experiment, however, was not tried any more. This poison is an extract, made, by the means of fire, from the juices of various plants; and especially of some particular *Lianes*. 'Tis affirmed, there are the juices of above thirty several sorts of herbs, or roots, in the poison made by the *Ticunas*; which was what I used, and which is the most valued, of the various sorts known, on the sides of the *Amazon*. The *Indians* always compound it after the same manner; and follow, with the utmost exactness, the direction received from their ancestors, (as scrupulously as is done by the chymists, or apothecaries with us, in the preparation of the *Theriaca Andromachi*, or *Venice Treacle*;) without omitting the least ingredient prescribed; though, probably, this great multiplicity may be no more necessary, in the *Indian* poison, than in the *European* antidote.

Mankind will, undoubtedly, be surprized, that, amongst a people, who have at their disposal an instrument so certain, and so ready, to satiate their hatred, jealousy, or revenge, this subtle and deadly a poison, should only be fatal to monkeys, and wild fowl. It is yet more astonishing, that a missionary, always feared, and sometimes hated, by his *New Converts*, to whom, his function does not allow him to be as complaisant, as they could wish, or might expect, lives amongst them without fear

\* Messieurs *Mussenbrock*, *Van Wieten*, and *Albinus*.

or mistrust. Nor is this all; these men, so little to be dreaded, are savages, and generally without any idea of religion.

Having heard at *Cayenne*, the wonderful, and ever new *Phænomenon*, of the multiplication of that species of fish called *Polypus*, discovered by M. *Tremblay*, and since confirmed, by the experiments of Messieurs *de Reaumur*, *de Justice*, and a great number of natural philosophers, I made some experiments upon some large ones, very common upon this coast; but my first trials did not succeed; and my sickness prevented my repeating them.

Almost five months waiting at *Cayenne*, without seeing the man of war, that was expected, and without hearing any thing from *France*, from which I had been deprived five years, made a deeper impression upon me, than nine years travels and fatigues. Accordingly, I was seized with a languishing distemper, and the jaundice, for which, the most effectual remedy I could find, was the exceeding polite answer, I received from M. *Mauricius*, governor of the *Dutch* colony at *Surinam*, wherein he offered me his house there, with the choice of a vessel for *Holland*, and even a pass, in case of a rupture between *France* and the *States General*. I did not lose a moment; but, after a stay of six months at *Cayenne*, I set out from thence, upon the mending hand, *August* 22, 1744, in the king's canoe, which M. *D'Orvilliers* was pleased to assign me, to carry me to that colony, with a serjeant of the garrison for a guide, who was only to command the rowers. Accordingly, this voyage was shorter than that from *Para* to *Cayenne*; I only stopt, by the way, to compleat the number of the *Indians*, who were to row; and the reverend father missionary of *Senamary* procured

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me the most of them, notwithstanding the panic fear, of an imaginary contagion, at *Surinam*, the false report whereof had reached them. In effect, after deducting the time of my stops, voluntary, and forced, I ran, in sixty odd hours, from *Cayenne* to *Surinam* river, which I entered the 27th.

On the 28th, I went up the river five leagues; and arrived at *Paramaribo*, the capital of the *Dutch* colony at *Surinam*, the governor whereof was even much more obliging in reality, than he had given me reason to expect, by his offers. I observed the latitude, in that place, to be five degrees forty-nine minutes *north*, and made some other remarks, during the five days of my stay there; after which, I embarked, *September* 3d, in a merchantman, that was going for *Amsterdam*.

On the 29th, I was prevented, by bad weather, from shewing my pass to an *English* privateer, who, probably, would not much have regarded it; since, at first sight, he fired a whole broadside at us, (though we had put our *Dutch* colours out,) to make us send our boat aboard.

On the 6th of *November*, and in as bad weather, a privateer of *St. Malo* came up with us likewise, in search of booty, but accosted us somewhat more politely; for having approached within hearing, he was satisfied, at last, with the assurance I gave him, (after making myself known) that he would but lose his time with us. On the 16th, we took in a coasting pilot, at the mouth of the *Texel*, to carry us into port; but, being obliged to avoid the land, whereof we were in search, we wandered up and down, during fifteen days, the shortest in the year, and in continual fogs, with the plummet always in hand, in a sea full of shoals and sands. We beheld one night, the lights of *Scheveling*, which are seldom to be seen without danger; and at last dis-

discovered the coast of *Vlielandt*, whilst our pilots judged themselves, by their reckoning, to be within sight of the *Texel*. On *November 30th*, in the evening, I landed at *Amsterdam*; where, and at the *Hague*, I staid above two months, till I could get the passports, that were necessary, for my travelling safely through the *Low Countries*. For those of *England*, I was obliged to the civility of *Mr. Trevor*, who granted them, without any difficulty, to *M. L'Abbé de la Ville*, minister of *France*; and I owed those of the *Queen of Hungary's* minister, to the officious goodness of *M. le Count de Bentinck*; so that, at last, I arrived at *Paris*, on *February 23, 1745*, almost ten years after my departure from thence.

F I N I S.