

## CHAPTER VII

Plans -- A Bridge over the Mercy -- Mode adopted for making an Island of Prospect Heights -- The Drawbridge -- Harvest -- The Stream -- The Poultry Yard -- A Pigeon-house -- The two Onagas -- The Cart -- Excursion to Port Balloon.

The settlers in Lincoln Island had now regained their dwelling, without having been obliged to reach it by the old opening, and were therefore spared the trouble of mason's work. It was certainly lucky, that at the moment they were about to set out to do so, the apes had been seized with that terror, no less sudden than inexplicable, which had driven them out of Granite House. Had the animals discovered that they were about to be attacked from another direction? This was the only explanation of their sudden retreat.

During the day the bodies of the apes were carried into the wood, where they were buried; then the settlers busied themselves in repairing the disorder caused by the intruders, disorder but not damage, for although they had turned everything in the rooms topsy-turvy, yet they had broken nothing. Neb relighted his stove, and the stores in the larder furnished a substantial repast, to which all did ample justice.

Jup was not forgotten, and he ate with relish some stone-pine almonds and rhizome roots, with which he was abundantly supplied. Pencroft had

unfastened his arms, but judged it best to have his legs tied until they were more sure of his submission.

Then, before retiring to rest, Harding and his companions seated round their table, discussed those plans, the execution of which was most pressing. The most important and most urgent was the establishment of a bridge over the Mercy, so as to form a communication with the southern part of the island and Granite House; then the making of an enclosure for the musmons or other woolly animals which they wished to capture.

These two projects would help to solve the difficulty as to their clothing, which was now serious. The bridge would render easy the transport of the balloon case, which would furnish them with linen, and the inhabitants of the enclosure would yield wool which would supply them with winter clothes.

As to the enclosure, it was Cyrus Harding's intention to establish it at the sources of the Red Creek, where the ruminants would find fresh and abundant pasture. The road between Prospect Heights and the sources of the stream was already partly beaten, and with a better cart than the first, the material could be easily conveyed to the spot, especially if they could manage to capture some animals to draw it.

But though there might be no inconvenience in the enclosure being so far from Granite House, it would not be the same with the

poultry-yard, to which Neb called the attention of the colonists. It was indeed necessary that the birds should be close within reach of the cook, and no place appeared more favourable for the establishment of the said poultry-yard than that portion of the banks of the lake which was close to the old opening.

Water-birds would prosper there as well as others, and the couple of tinamous taken in their last excursion would be the first to be domesticated.

The next day, the 3rd of November, the new works were begun by the construction of the bridge, and all hands were required for this important task. Saws, hatchets, and hammers were shouldered by the settlers, who, now transformed into carpenters, descended to the shore.

There Pencroft observed,--

"Suppose, that during our absence, Master Jup takes it into his head to draw up the ladder which he so politely returned to us yesterday?"

"Let us tie its lower end down firmly," replied Cyrus Harding.

This was done by means of two stakes securely fixed in the sand. Then the settlers, ascending the left bank of the Mercy, soon arrived at the angle formed by the river.

There they halted, in order to ascertain if the bridge could be thrown across. The place appeared suitable.

In fact, from this spot, to Port Balloon, discovered the day before on the southern coast, there was only a distance of three miles and a half, and from the bridge to the Port, it would be easy to make a good cart-road which would render the communication between Granite House and the south of the island extremely easy.

Cyrus Harding now imparted to his companions a scheme for completely isolating Prospect Heights so as to shelter it from the attacks both of quadrupeds and quadrumana. In this way, Granite House, the Chimneys, the poultry-yard, and all the upper part of the plateau which was to be used for cultivation, would be protected against the depredations of animals. Nothing could be easier than to execute this project, and this is how the engineer intended to set to work.

The plateau was already defended on three sides by watercourses, either artificial or natural. On the north-west, by the shores of Lake Grant, from the entrance of the passage to the breach made in the banks of the lake for the escape of the water.

On the north, from this breach to the sea, by the new watercourse which had hollowed out a bed for itself across the plateau and shore, above and below the fall, and it would be enough to dig the bed of this creek a little deeper to make it impracticable for animals, on all the eastern border by the sea itself, from the mouth of the

aforesaid creek to the mouth of the Mercy.

Lastly on the south, from the mouth to the turn of the Mercy where the bridge was to be established.

The western border of the plateau now remained between the turn of the river and the southern angle of the lake, a distance of about a mile, which was open to all comers. But nothing could be easier than to dig a broad deep ditch, which could be filled from the lake, and the overflow of which would throw itself by a rapid fall into the bed of the Mercy. The level of the lake would, no doubt, be somewhat lowered by this fresh discharge of its waters, but Cyrus Harding had ascertained that the volume of water in the Red Creek was considerable enough to allow of the execution of this project.

"So then," added the engineer, "Prospect Heights will become a regular island, being surrounded with water on all sides, and only communicating with the rest of our domain by the bridge which we are about to throw across the Mercy, the two little bridges already established above and below the fall; and, lastly, two other little bridges which must be constructed, one over the canal which I propose to dig, the other across to the left bank of the Mercy. Now, if these bridges can be raised at will, Prospect Heights will be guarded from any surprise."

The bridge was the most urgent work. Trees were selected, cut down, stripped of their branches, and cut into beams, joists, and planks.

The end of the bridge which rested on the right bank of the Mercy was to be firm, but the other end on the left bank was to be movable, so that it might be raised by means of a counterpoise, as some canal bridges are managed.

This was certainly a considerable work, and though it was skilfully conducted, it took some time, for the Mercy at this place was eighty feet wide. It was therefore necessary to fix piles in the bed of the river so as to sustain the floor of the bridge and establish a pile-driver to act on the tops of these piles, which would thus form two arches and allow the bridge to support heavy loads.

Happily there was no want of tools with which to shape the wood, nor of iron-work to make it firm, nor of the ingenuity of a man who had a marvellous knowledge of the work, nor lastly, the zeal of his companions, who in seven months had necessarily acquired great skill in the use of their tools; and it must be said that not the least skillful was Gideon Spilett, who in dexterity almost equalled the sailor himself. "Who would ever have expected so much from a newspaper man!" thought Pencroft.

The construction of the Mercy bridge lasted three weeks of regular hard work. They even breakfasted on the scene of their labours, and the weather being magnificent, they only returned to Granite House to sleep.

During this period it may be stated that Master Jup grew more

accustomed to his new masters, whose movements he always watched with very inquisitive eyes. However, as a precautionary measure, Pencroft did not as yet allow him complete liberty, rightly wishing to wait until the limits of the plateau should be settled by the projected works. Top and Jup were good friends and played willingly together, but Jup did everything solemnly.

On the 20th of November the bridge was finished. The movable part, balanced by the counterpoise, swung easily, and only a slight effort was needed to raise it; between its hinge and the last cross-bar on which it rested when closed, there existed a space of twenty feet, which was sufficiently wide to prevent any animals from crossing.

The settlers now began to talk of fetching the balloon-case, which they were anxious to place in perfect security; but to bring it, it would be necessary to take a cart to Port Balloon, and consequently, necessary to beat a road through the dense forests of the Far West. This would take some time. Also, Neb and Pencroft having gone to examine into the state of things at Port Balloon, and reported that the stock of cloth would suffer no damage in the grotto where it was stored, it was decided that the work at Prospect Heights should not be discontinued.

"That," observed Pencroft, "will enable us to establish our poultry-yard under better conditions, since we need have no fear of visits from foxes nor the attacks of other beasts."

"Then," added Neb, "we can clear the plateau, and transplant wild plants to it."

"And prepare our second cornfield!" cried the sailor with a triumphant air.

In fact, the first cornfield sown with a single grain had prospered admirably, thanks to Pencroft's care. It had produced the ten ears foretold by the engineer, and each ear containing eighty grains, the colony found itself in possession of eight hundred grains, in six months, which promised a double harvest each year.

These eight hundred grains, except fifty, which were prudently reserved, were to be sown in a new field, but with no less care than was bestowed on the single grain.

The field was prepared, then surrounded with a strong palisade, high and pointed, which quadrupeds would have found difficulty in leaping. As to birds, some scarecrows, due to Pencroft's ingenious brain, were enough to frighten them. The seven hundred and fifty grains, deposited in very regular furrows, were then left for nature to do the rest.

On the 21st of November, Cyrus Harding began to plan the canal which was to close the plateau on the west, from the south angle of Lake Grant to the angle of the Mercy. There was there two or three feet of vegetable earth, and below that granite. It was therefore necessary to manufacture some more nitro glycerine, and the nitro glycerine did its



accustomed work. In less than a fortnight a ditch twelve feet wide and six deep, was dug out in the hard ground of the plateau. A new trench was made by the same means in the rocky border of the lake forming a small stream, to which they gave the name of Creek Glycerine, and which was thus an affluent of the Mercy. As the engineer had predicted, the level of the lake was lowered, though very slightly. To complete the enclosure the bed of the stream on the beach was considerably enlarged, and the sand supported by means of stakes.

By the end of the first fortnight of December these works were finished, and Prospect Heights--that is to say, a sort of irregular pentagon having a perimeter of nearly four miles, surrounded by a liquid belt--was completely protected from depredators of every description.

During the month of December, the heat was very great. In spite of it however, the settlers continued their work, and as they were anxious to possess a poultry-yard they forthwith commenced it.

It is useless to say that since the enclosing of the plateau had been completed, Master Jup had been set at liberty. He did not leave his masters, and evinced no wish to escape. He was a gentle animal, though very powerful and wonderfully active. He was already taught to make himself useful by drawing loads of wood and carting away the stones which were extracted from the bed of Creek Glycerine.

The poultry yard occupied an area of two hundred square yards on the

south eastern bank of the lake. It was surrounded by a palisade, and in it were constructed various shelters for the birds which were to populate it. These were simply built of branches and divided into compartments made ready for the expected guests.

The first were the two tinamous, which were not long in having a number of young ones; they had for companions half a dozen ducks, accustomed to the borders of the lake. Some belonged to the Chinese species, of which the wings open like a fan, and which by the brilliancy of their plumage rival the golden pheasants. A few days afterwards, Herbert snared a couple of gallinaceæ, with spreading tails composed of long feathers, magnificent alectors, which soon became tame. As to pelicans, kingfishers, water-hens, they came of themselves to the shores of the poultry-yard, and this little community, after some disputes, cooing, screaming, clucking, ended by settling down peacefully, and increased in encouraging proportion for the future use of the colony.

Cyrus Harding, wishing to complete his performance, established a pigeon-house in a corner of the poultry-yard. There he lodged a dozen of those pigeons which frequented the rocks of the plateau. These birds soon became accustomed to returning every evening to their new dwelling, and showed more disposition to domesticate themselves than their congeners, the wood-pigeons.

Lastly, the time had come for turning the balloon-case to use, by cutting it up to make shirts and other articles; for as to keeping it

in its present form, and risking themselves in a balloon filled with gas, above a sea of the limits of which they had no idea, it was not to be thought of.

It was necessary to bring the case to Granite House, and the colonists employed themselves in rendering their heavy cart lighter and more manageable. But though they had a vehicle, the moving power was yet to be found.

But did there not exist in the island some animal which might supply the place of the horse, ass, or ox? That was the question.

"Certainly," said Pencroft, "a beast of burden would be very useful to us until the captain has made a steam cart, or even an engine, for some day we shall have a railroad from Granite House to Port Balloon, with a branch line to Mount Franklin!"

One day, the 23rd of December, Neb and Top were heard shouting and barking, each apparently trying who could make the most noise. The settlers, who were busy at the Chimneys, ran, fearing some vexatious incident.

What did they see? Two fine animals of a large size, who had imprudently ventured on the plateau, when the bridges were open. One would have said they were horses, or at least donkeys, male and female, of a fine shape, dove-coloured, the legs and tail white, striped with black on the head and neck. They advanced quietly without

showing any uneasiness, and gazed at the men, in whom they could not as yet recognise their future masters.

"These are onagas!" cried Herbert, "animals something between the zebra and the conaga!"

"Why not donkeys?" asked Neb.

"Because they have not long ears, and their shape is more graceful!"

"Donkeys or horses," interrupted Pencroft, "they are 'moving powers,' as the captain would say, and as such must be captured!"

The sailor, without frightening the animals, crept through the grass to the bridge over Creek Glycerine, lowered it, and the onagas were prisoners.

Now, should they seize them with violence and master them by force? No. It was decided that for a few days they should be allowed to roam freely about the plateau, where there was an abundance of grass, and the engineer immediately began to prepare a stable near the poultry-yard, in which the onagas might find food, with a good litter, and shelter during the night.

This done, the movements of the two magnificent creatures were left entirely free, and the settlers avoided even approaching them so as to terrify them. Several times, however, the onagas appeared to wish to

leave the plateau, too confined for animals accustomed to the plains and forests. They were then seen following the water-barrier which everywhere presented itself before them, uttering short neighs, then galloping through the grass, and becoming calmer, they would remain entire hours gazing at the woods, from which they were cut off for ever!

In the meantime harness of vegetable fibre had been manufactured, and some days after the capture of the onagas, not only the cart was ready, but a straight road, or rather a cutting, had been made through the forests of the Far West, from the angle of the Mercy to Port Balloon. The cart might then be driven there, and towards the end of December they tried the onagas for the first time.

Pencroft had already coaxed the animals to come and eat out of his hand, and they allowed him to approach without making any difficulty, but once harnessed they reared and could with difficulty be held in. However it was not long before they submitted to this new service, for the onaga, being less refractory than the zebra, is frequently put in harness in the mountainous regions of Southern Africa, and it has even been acclimatised in Europe, under zones of a relative coolness.

On this day all the colony, except Pencroft who walked at the animals' heads, mounted the cart, and set out on the road to Port Balloon.

Of course they were jolted over the somewhat rough road, but the vehicle arrived without any accident, and was soon loaded with the

case and rigging of the balloon.

At eight o'clock that evening the cart, after passing over the Mercy bridge, descended the left bank of the river, and stopped on the beach. The onagas being unharnessed, were thence led to their stable, and Pencroft before going to sleep gave vent to his feelings in a deep sigh of satisfaction that awoke all the echoes of Granite House.