

WANDERINGS IN THE GREAT FORESTS OF BORNEO

BY
ODOARDO BECCARI

With an Introduction by the Earl of Cranbrook



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a sign of good luck, and my Dyaks asked me to allow them to stop a little while in token of respect, to which I readily consented. They stopped rowing, and remained a few minutes quite still with their paddles lifted, and then cheerfully resumed their labour.

It was nearly noon on October 24th when we left the Kanowit and entered the Entabei. Here we found the current stronger, but as the water was shallow we made good progress with the "suars," i.e. by poling. Ladja's men were very clever at this work, and could push a boat rapidly up shallow streams with strong currents in a way unknown in the Malay Islands east of Borneo. The study of poling-methods in various countries would be not without its interests. Our Arno boatmen in Tuscany always pole where the river is shallow, and use their poles exactly as the Dyaks do theirs, only they certainly cannot compare with the latter in the length of the journeys thus performed with their light canoes. Ours literally flew over the surface of the water, handled with incomparable dexterity by my six young savages. There is to my mind no lighter and more pleasant method of progression, and certainly no kind of work displays so well the elegant movements and perfect proportions of these young Dyaks, who, practically unencumbered with clothing, are truly splendid specimens of humanity. Timing their movements with marvellous precision, one stands erect and raises his *suar*, while his neighbour bends low over his as he thrusts it into the bed of the torrent, and so alternately. Anyone inexperienced in the work would very soon be overboard.

Several villages were passed, but as it was still daylight we continued on our way, only halting when the shade of the trees of both banks, which now nearly touched each other overhead, had deepened into darkness.

The morning of the 25th was delicious; a cool gentle breeze wafted to us the sweet scent of the blossoming trees in the neighbouring forest. The sun, in spite of its tropic fierceness, hardly managed to pierce the dense mass of foliage overhead with a few of the slenderest rays, which, reflected by the limpid crystalline waters of the river in dancing shafts of light, fitfully illumined the green tunnel through which we made our way. The clear water ran over a bed of gravel, at times sloping enough to form a series of small rapids, covered over a wide area by a singular plant having purplish leaves with sheeny reflections. This was a small aroid (*Cryptocoryne bullosa*, Becc.), belonging to a genus the species of which live mostly under water. The leaves of this plant are most remarkable. Their surfaces are not flat, but pitted beneath and with corresponding protuberances above, as in some varieties of the common cabbage. What is the cause of such a conformation in an aquatic plant? All structural peculiarities in an organ must have, or have had, some cause or reason—for adaptation, as I understand

it, is merely the result of the action of stimuli on organisms at one time endowed with the faculty of modifying themselves according to their environment. Admitting this, what stimulus can have produced the singular conformation of the leaves of this *Cryptocoryne*? Perhaps it was the need of enlarging the assimilating surface of the leaves (the plant living in shady places) without increasing too much the resistance to the water current, which might have torn it. Or was it due to the current itself exercising a continuous tension on the surface of the leaves in the spaces between the longitudinal and the transverse ribs, and distending the tissues in these parts, as the wind would a sail. Or have both the above mentioned causes contributed to render hereditary a character which was at first accidental, but of daily occurrence? There are some plants in which the tension of water against the leaf surface has acted more energetically, lacerating the least protected places so as to produce complete perforations. This is the case with some of the *Uvirandras*.

The above-mentioned *Cryptocoryne*, the cause of this digression, was then in blossom, but the inflorescences were submerged and all closed. Probably they only expand when the waters are very low, or else the plant is one of those termed by botanists cleistogamous, i.e. producing flowers which never open, not even when fecundation is taking place.

I searched most carefully on the rocks, both submerged and awash, for Podostomaceæ, as such places looked likely for these plants, but I found none. The absence of members of this family through the entire Malay Archipelago excepting Java is singular, for several are found in Ceylon, whose flora offers so many affinities with that of Malaysia. All the rocks we had seen so far were sandstone.

We camped for the night on a projecting tongue of land which lies at the confluence of the Mintei and the Entabei. On the bank, exactly at the point where the two rivers meet, rose a most majestic tapang (*Abauria excelsa*), one of the finest specimens of this gigantic tree. I had never been able to ascertain the height of these giants on account of their surroundings. But here was an excellent opportunity for taking a measurement, for the tongue of land was perfectly level and flat, and gave me the means of measuring a base. With this datum, a very simple trigonometrical operation enabled me to determine the height of the tree, which proved to be 230 feet from the ground to the top of its immense crown of foliage.¹ Six

¹ I am of opinion that the heights of 450 feet and more attributed to some Australian trees (*Eucalyptus*) are unreliable. [Mr. W. Ferguson, Inspector of State Forests, measured a fallen *Eucalyptus* on the Watts River which by the tape was 435 ft. from base to a point where it was fractured. Here its diameter was 36 inches. "Before it fell," he writes, "it must have been more than 500 feet high." (v. A. Trollope's *Australia and New Zealand*, vol. 1, appendix iv.)—ED.]

CHAPTER XXII

FROM THE BATANG LUPAR TO KUCHING—SIMANGGAN—A SWAMPY FOREST
—AT BANTING—ASCENT OF MOUNT LINGGA—DIFFICULTIES BESET OUR
JOURNEY—ASTRAY IN THE LAGOONS OF THE LINGGA—DYAK INSTRUMENT FOR HUSKING RICE—AN EXPERIMENT WITH UPAS POISON—THE
KULIT-LAWAN—AMONGST THE SABUYO DYAKS—MARSHES WITH
PANDANI—FROM SUMUNDJANG TO SAMARAHAN—LOST IN THE FOREST
—END OF THE JOURNEY.

SIMANGGAN Fort is built on a very slight eminence rising from the river bank, but it is quite sufficient to afford a view over a large extent of country. The surrounding district is covered by a swampy forest of high trees, whose bases remain all the year round in water. This kind of forest is the most tedious to cross, but it is that which offers the greatest harvest to the naturalist, on account of the enormous variety of species which form it, a fact which I am inclined to attribute to the ready dissemination of fruits by the water. As most of these fruits float, they are easily carried about during floods by the current; and if the forests are invaded by water they find favourable conditions for germinating.

From Simanggan there is a good pathway leading to Undup, with which I was already acquainted, having traversed it twice; the first time with the Bishop of Labuan the year before, the second when I came to Simanggan, in March, on my way to Marop. But the pleasure of being able to walk comfortably and dry in a Bornean forest was too great for me to resist the temptation of going there again.

The forest would doubtless have rewarded me with many things of interest if I had been able to stay and work it, but a mere excursion through it can hardly be expected to give important results, since it is impossible to have trees climbed or felled in order to get specimens. Nevertheless, I found submerged beneath the water, which remains permanently in the lower hollows of the forest, another very distinct species of *Cryptocoryne* (*C. longicauda*, Becc., cf. *Malesia*, i. pl. 27, Fig. 6), of which I had the misfortune afterwards to lose the only specimens collected, though I fortunately have a drawing made on the spot. This genus of aquatic plants is of especial interest, on account of the multiplicity of its adaptations to a subaqueous life. I have already mentioned *Cryptocoryne*

bullosa, which lives in the clear and rapid waters of the Entabei. I found other species of the same genus on the muddy banks of the Bintulu and Igan; and another and very large species (*C. ciliata*, Fisch.) is abundant on the slimy mud along the banks of the Sarawak river, where at low tide it is partially out of the water. The *Cryptocoryne* of the Simanggan forest was evidently adapted to live in the limpid waters of the densest forests, and thus in perennial deep shade. The spathe in species is very long, and terminates in a long filament which resembles that of the European *Arisarum proboscideum*, and serves, perhaps, to guide fecundating insects into the nuptial chamber when the waters are low. Another species (*Cryptocoryne pallidinervia*, Engl.), found at Simanggan, grows under conditions resembling those in which *C. longicauda* occurs, and is an instance (which I believe to be hitherto unrecorded) of a subaqueous plant having leaves variegated with white along the midrib.

I remained for a week at Simanggan Fort as the Tuan Muda's guest, and was thus able to finish drying and arranging the plants which I had collected. They were not numerous, but were of exceptional importance.

At that time of the year to return by sea to Kuching was a serious undertaking in a small boat, for the north-east monsoon was blowing strong on the coast. I was very desirous, moreover, of visiting and exploring the country between the Batang Lupar and the Sarawak rivers, a region quite unknown to me. I therefore decided to return to Kuching overland. Of the Dyaks who had accompanied me thus far, Ladja and one other alone expressed the wish to go on with me, the others remaining at Simanggan. I had, besides, my two Malays, Sahat and Bakar, who had followed me from Bintulu, and the Tuan Muda kindly gave me a boat and a few more Sea-Dyaks to accompany me as far as Banting (Fig. 56).

We left Simanggan early on November 8th, but shortly after noon a most violent storm burst over us, obliging us to seek refuge in a small stream until the wind abated. The river, which was very wide at that spot, assumed the aspect of a tempestuous sea, and would have been very dangerous for our fragile boat. That evening we reached Lingga, and I took up my quarters in the old fort.

Early next morning I went up to the mission-house at Banting, where Mr. Chambers gave me a most cordial and hospitable reception, repeating the kindnesses he had shown me a year before when I visited him with the Bishop of Labuan. The next day was a Sunday, and I took a quiet stroll on the hill, leaving my gun at home. Banting Hill is entirely covered with great fruit-trees, mostly durians, amongst which the Dyak houses are built.

From Banting one has a fine view of Gunong Lingga, or Gunong Lessong, thus named on account of its shape—a truncated cone

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