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The following account by Dr. N. Wallich, who was at that time the Superintendent of the Government Botanical Garden at Calcutta, of his excursion into rural Burma in 1826 was quoted in full in John Crawfurd's account of his mission, of which Dr. Wallich was a part, to Ava in that year. As Crawfurd explains in his introduction to the entry: "Dr. Wallich returned to-day from a botanical excursion to the range of mountains lying east of Ava, which he performed with the sanction of the Burman Government. The following is the narrative of this short but interesting journey, which was replete with botanical discoveries."

M.W.C.

**Brief Excursion to the Hills to the East of Ava
in November 1826**

Dr. N. Wallich

Superintendent of the Government Botanical Garden at Calcutta(c. 1826)

I left Sagaing with Lieutenant Montmorency at half-past eleven o'clock on the forenoon of the 22d of November [1826], and crossed the Irawadi opposite to the mouth of the Myit-ngé, or little river, which bounds the town of Ava to the east. The early part of this day's journey was along the right bank of that stream, the course of which is remarkably tortuous,—more so, I think, than that of the river Gumtee in Hindostan, which takes its name from this circumstance. We passed two villages, and saw some fields of cotton and rice, with several gardens of betel pepper. These last

consisted of latticed enclosures, covered in with mats. There, were no trees within, but the vines were trailed on the latticed walls, which were at least double the height of any which I had ever seen before. The leaves were piquant, juicy, and high flavoured. The road was generally good, but our progress was delayed by the small number, of our carriers, and we were obliged to hire two carts. A shower of rain forced us to take shelter under a shed on the road-side. Here we saw an old lady riding on an elephant, one of the Royal Family, recognized as such by her gilded umbrella: she was followed by a numerous train of females. At half-past five in the evening we halted at the village Shwe-zí, putting up at a Zayat, or caravansera: close to this place was a large group of ancient temples, resembling in form those of Pagan. The country around was scarcely less bleak and sterile than in the neighbourhood of that place. I found here, however, the first new plant, a beautiful single lanceolate-leaved *croton*, cultivated for hemp. Our course, in to-day's journey, was north-east; and when we halted, the hills were not above three miles distant. These are the first of several ranges visible from Ava.

We left our ground at eight o'clock in the morning of [November] the 23d [1826]. The road soon became very indifferent, and we passed through a country much covered by the *Zizyphus Jujuba*, or *Bher*, as it is called in Hindostan. Here and there, there were a few patches of cultivated ground. The course of the Myit-ngé was at no great distance to our right. At three in the afternoon we arrived at a spacious range of Zayats, the best of which we took possession of. The Myit-ngé was still close at hand; and not far off was a group of temples, and a very splendid monastery, well filled with priests. The temples, we were told, were constructed by the present King. One of the buildings had its inner wall crowded with odd grotesque paintings, each group or figure having underneath it an inscription. Some of these paintings represented Hindoos, Mohammedans of India, Chinese, Aracanese, Shans, and Europeans, carrying offerings to a temple of Gautama. We were particularly struck with the representation of a Mohammedan horseman riding over and upsetting his followers, the horse plunging and rearing, and the rider unsaddled and clinging to his neck.

In this day's route we met a caravan of Shans returning to their own country. The principal part of their merchandise

consisted of Ngapyi, or pickled fish. Their numerous cattle, consisting of oxen, large and in excellent condition, were grazing in an extensive plain, not far from the road-side. The path we were pursuing was the common route between the Shan country, or Lao, and Ava.

Delays and difficulties, occasioned by the laziness and apathy of our Burman attendants and guides, prevented us from pursuing our journey, on [November] the 24th [1826], until eight o'clock in the morning. The carts would not accompany us to the foot of the hills; and the porters, whom we got in lieu of them, insisted upon being relieved before they had got on two miles. This was at the village of Kwe-napa [Crawfurd's note: The Buffalo's Nose. This seems to be the name of the hill], close to the bank of the Myit-ngé, which at this place is very narrow, with steep banks. At a ferry, which is here, we saw ten or twelve boats, with a number of carts waiting to cross. We resumed our march at eleven o'clock, and began to pass through a forest of bamboos, some of which were in flower. Here I had the satisfaction to find the plant of *Sapindi*, on the very spot where my assistant had discovered it not many days before. It is nearly allied to *Cardiospermum*, with a heart-shaped, flat fruit, resembling an ace of spades; I called it *Cardiopteris*. Hitherto, with the exception of the caravan of Shans, we had seen few travellers; but in passing through this forest we met with several. The ground soon began to rise in a gentle acclivity, and we shortly reached the foot of the hills. In the low land, detached rocks were seen here and there, composed of compact limestone. The ascent of the mountains occupied exactly five hours. The road was winding, but far from steep or difficult; for the greater part of it I rode my pony. No section of the rock was any where to be seen; but, we frequently passed over masses of it, forming the road. About half-way up we passed the village of Ziben, near to which there was cultivated a little rice and some millet. A little beyond it I found the species of oak which my assistant had brought to me. Along with it was seen the teak, although not very frequent; so that here probably, for the first time, by an European at least, was seen growing naturally, side by side, the two greatest glories of the forests of Europe and Asia. I did not, in all, see above forty teak trees, and they were evidently not at home, for their stems were irregular, not exceeding ten feet high to the crown, nor above ten or twelve inches in diameter. The trees were in fruit; and

under the old ones were to be seen numerous seedlings. At six in the evening we reached Tong-taong, or, the Village of the Three Mountains, and found shelter for the night in a tolerably good wooden house. The evening soon became cold, and we were glad to get under our blankets at an early hour. The village we were at was but small; it is situated on a spacious table-land, considerably below the highest portion of the mountain. Our *cicerone*, rather a disagreeable person, addicted to strong potations and other irregularities, and who slept in the same apartment with us, was the lord, or, as the Burmans call it, 'the eater' of this village and the lands attached to it. Belonging to it are some good fields of millet, nearly ripe, with fields of sesamum, tobacco, and maize. In its gardens and orchards there were, ginger, papaya figs, jacks, and guavas, with some common esculent vegetables. Among the latter there was abundance of pumpkins, and a large kind of bean, pretty frequent in Hindostan (*Dolichostetra gronolobus*.) Among the trees there was one remarkable for such a situation, the common pear-tree. The greater number of these were covered with a profusion of blossoms; on some, however, there was fruit nearly ripe. This was round, a little depressed, tolerably smooth, and of a brown colour. Although neglected, and nearly in a wild state, it was not without flavour.

Part of the forenoon of [November] the 25th [1826] we spent in arranging and putting up the rich harvest of plants which I had made the day before. At noon we made an excursion into the forest, where I discovered a second species of oak, larger than the first, and a new species of raspberry.

On [November] the 26th [1826], we ascended the highest part of the mountain, which I estimate to be between three and four hundred feet above the level of the table-land on which the village stands. In this excursion, I made a fine collection of rare plants, among which were two additional oaks and a walnut-tree, with ripe fruit, smaller than the common kind; of which last, by the way, we found the nuts in the village, said to be brought from the country of the Shans, No strawberries nor firs were found in any part of the hills, and, upon the whole, but few ferns. I discovered but one *Carex* and no arjemony, though this be found on the hills of the Nepal. I did not find either the tea or *Camellea*, nor do the people seem to be aware that they exist in these hills. I found, however, one *Gordonia*, a genus nearly allied to them. Among the plants

found in this day's excursion, were some noble gigantic *Hedycheæ*, out of flower. Of these and other *Scitamineæ* and *Orchideæ*, I took large roots.

The ascent to the top of the hill was now clearing for cultivation, and traces of that of the last season were visible. It is curious to observe that the only trees allowed to stand are oaks. These are of no great height or size, seldom exceeding two feet in diameter; they certainly do not exceed in size those found upon the lowest hills of Nepal. Two of the species were in flower.

At seven, in the morning of [November] the 27th [1826], we commenced our journey back to Ava. At nine o'clock we arrived at a village about two-thirds of the way down; and after halting there for some time, we prosecuted our journey, reaching the foot of the hills at two in the afternoon. It took us an hour more to pass through the bamboo jungle; and after a march, which we estimated at ten miles, we halted for the night at a village, putting up, as usual, at a Zayat. On our way down we met a number of loaded cattle proceeding to the country of the Shans with merchandise; and near the place where, we halted we saw a still greater number of oxen, belonging to Shan merchants, grazing in the fields.

We did not leave the village until eight o'clock in the morning, delayed, as usual, in collecting porters to carry our luggage. In the early part of our journey we passed several villages, and at twelve entered the high-road leading to Amarapura. We passed under the walls of that town, having a large lake to our left. Proceeding towards the Irawadi, we went through the extensive suburbs of Amarapura, and soon reached the river. At two o'clock our party embarked in three small boats, and in an hour, and a half reached Sagaing.

That portion of the mountain which we ascended lies due east from Sagaing, which was so distinctly visible from the top, that we found no difficulty in taking its bearings. The distance, calculated to the place where we began to ascend, we computed at about twenty miles. The general direction of the whole range is nearly north and south. The thermometer, before sunrise in the morning, stood at the lowest at 56°. At Sagaing, at the same hour, it stood at 67°. This makes a difference of eleven degrees, which, allowing three hundred feet of elevation to each degree, will make the height of the hill, above the level of Sagaing, 3300 feet. The thermometer, however, was observed at-fehe village, which I estimated to be from

three to four hundred feet below the highest portion of the hill which I ascended; so that the greatest elevation of the mountain may be estimated at about 3600 feet above the Irawadi.

We found the air bracing and elastic. At night heavy dews fell. The thermometer, in the morning at sunrise, as I have already mentioned, was at 56°, and at the highest 60°. I had it in my power to make but one observation in the afternoon, when it rose to 74°. The medium of three observations, taken in the evening at eight o'clock, gave 61°. In the dry season these mountains are probably healthy, at least to those accustomed to live on them, who had all the appearance of good health. The inhabitants of the plains, however, consider them extremely insalubrious; and it is probable, from the great quantity of forest, that they are so in the wet season, at least to those whose constitutions are unaccustomed to them.

I brought with me abundant specimens of the rock, wherever it presented itself: this proved to be every where compact limestone, either of a blue or reddish brown colour. The only mineral was calcareous spar; but the inhabitants of the village gave us a few small specimens of *Iron Pyrites*, which they said was procured in the neighbourhood.

The soil was of a dark reddish brown colour, tolerably deep, and not hard or stubborn; the cultivation consisting of a little rice, maize, tobacco, some pulses, but chiefly large millet, (*andropogon cernium*), and sesamum. These thrive well, especially the two last, which were very luxuriant crops. The inhabitants are supplied with water from a fine spring, about half a mile from the village. Several small brooks of limpid water were to be found amongst the hills, and here and there a few pools in the beds of torrents which had existed during the rainy season.

With respect to plants, I was particularly fortunate in my researches; having obtained, in the short space of four days, between three and four hundred new species. Respecting these it is not necessary to add more than I have already said, as an ample account of them will be given in another place.

In our visit to the hills we saw very few wild animals. Of the larger, those said to exist are a small species of cow, called by the Burmans Shat; elephants, hogs, a few deer, tigers, leopards, and monkeys. The elephants appeared to be very numerous, and troublesome to the inhabitants. On the second night of our arrival,

the village we were at was alarmed by a threatened incursion of these animals, and we were kept awake for several hours by the blowing of horns and the shouting and howling of the inhabitants, to frighten them away. The population of the hills appeared to be extremely scanty. We saw but two villages. The inhabitants spoke the Burman language, but were dressed in the costume of the Shans, There is, however, a wild race on the mountains, known to the Burmans under the name Danno, but we saw none of them.

