

## Notes on a trip to Gunong Benom in Pahang.

BY W. D. BARNES.

Gunong Benom is the name usually given to the "massif" which lies in Ulu Pahang in the centre of the triangle the western side of which is formed by the Pahang Trunk Road running from Tranum through Tras and Raub to Kuala Lipis, the Eastern by the Jelai and Pahang rivers running from Kwala Lipis to Kwala Semantan, and the southern by the Tranum-Bentong road and the Bentong and Semantan rivers which latter river joins the Pahang at Kwala Semantan. The name Benom is used by the Malays on the Pahang river but seems unknown at Raub. The mountain is a very conspicuous object from the Raub Rest House. Its height has been fixed trigonometrically by observations from the Perak and Selangor borders at about 6800 feet.

In July 1900 an experienced mandore Che Musa was sent from Perak by Mr. Young, the present head of the F. M. S. Trigonometrical Survey to erect trigonometrical beacons at this and other points in Pahang. Difficulties having arisen I, in the middle of August undertook the work on Benom. Che Musa was then in Raub having reached what he took to be the top of the mountain and done some clearing there. He had returned for supplies but was unable to get any men to go back with him. With the assistance of Mr. Mason the Asst. District Officer at Raub I managed to collect 17 men on a promise of wages at 70 cents a day and food. The food I had the least hesitation in promising as I knew by experience that a Malay who goes into the jungle on board-wages invariably runs out of stores and has to return for more at the precise moment when work is most pressing and disagreeable. With these men Che Musa went back. On the 29th of August he met me again at Raub and reported that he had built a camp two days

march towards the Mountain and had carried to it half of the trigonometrical beacon and eight tins of rice. I had had all the rice soldered down in clean kerosine tins. The plan answered admirably. Each rice-coolie made a frame work like that of a knapsack on which to lash the tins and fitted it with straps of bark through which to pass his arms and carried in this way five and a half gantangs of rice (roughly the contents of a tin) rode comfortably, no time was wasted in packing and opening bundles, and most important of all—the rice kept perfectly without any of the usual trouble in preserving it from wet.

I was now ready to start and on arranging for my party found that the beacon (it was made of iron) needed a total of 22 men to carry it; more men were of course needed to carry rice for the beacon-carriers; I was very anxious to take sufficient food to last the whole party until the station had been cleared and the beacon fixed. I engaged therefore 32 coolies, all were Malays and but one or two were foreign Malays—Kelantan and Tringganu men. As they assured me that the mountain was infested with peculiarly vicious 'hantu' I engaged a 'pawang' one Wan Putih. He was recommended to me as a powerful exorcist who feared no 'hantu' whatever. In fact he was I was told perhaps a little too rough in the way he dealt with them. The 'pawang' whom Che Musa had taken with him had proved a hopeless failure. My five boatmen also went with me as well as a Malay boy and a Chinese cook. Che Musa completed a party of 42.

We left Raub on the 31st and stopped the night at Wan Putih's house in Ulu Gali. This though only two or three hours' walk from Raub was the last kampong on the way to the Gunong and to it the other half of the beacon had previously been brought. The afternoon was spent in getting packs, etc., all ready for an early start the next morning. I passed the night under a waterproof sheet; most of the men were accommodated by Wan Putih whose house was, if anything, even filthier than the usual Malay house.

Next morning one man was sick with fever and had to be left behind. Two others were engaged in his place and the whole party with half a trigonometrical beacon, a theodolite,

a load of botanical drying paper, my kit and bedding, rice and salt fish for the men and flour and fowls for me started off in good time. The first half of the day's march was easy, the rest up Bukit Numbih and down the other side was hard work for men carrying very inconveniently shaped pieces of angle iron. We camped on a tributary of the Klui which is a tributary of the Dong. The camp was at an elevation of about 1800 feet. Next day Che Musa with one man went back to Raub for more rice and food stores with instructions to hire men to bring them to Wan Putih's. The rest of us went on to the camp which Che Musa had previously made. Here we found a good 'pondok' and the 8 tins of rice and half the beacon. This camp was on another tributary of the Klui and also about 1800 feet high. The march was a short one. The day after I sent back 19 men to Wan Putih's to bring on the additional stores for which Che Musa had gone together with the balance of the beacon tools and with the rest of the men I went on to the foot of the Gunong, crossing Bukit Palas on the way. We stopped for the night at a point a little over 3100 feet high and as this was (so Che Musa had told me) the last place on the way up where water could be got and as the weather was distinctly unsettled (it had rained every day since we started) I set the men to work to build a good shelter.

On the third day ten men went back to the previous camp to bring on rice, whilst I went to Che Musa's clearing at the presumed top of the Gunong. To my surprise I found it to be only about 5000 feet high instead of 6800 as it should have been. As however the clearing was small and faced Raub it was impossible to make out the exact position. Next day I went up again with all the coolies left and started clearing and building a camp, and on the 7th it became obvious that the hill which Che Musa had thought to be the Gunong itself was really a subordinate one three miles away and separated from it by at least five deep valleys. After some consideration I decided to fix the beacon where I was. Looking for the true Gunong with a party of 40 men to feed was obviously out of the question and as the hill on which I was commanded a view of a large number of the main range trigonometrical stations and also much of the Gali and Dong Valleys invisible from the

highest point I decided that a beacon on it would at all events give some return for the expense incurred.

On the 8th Che Musa reached the top and by the 11th nearly all the beacon had arrived enabling me to send ten of my party back to Raub there to be paid off. Nearly all of them were sick with fever or otherwise useless for clearing and filling and I was very glad to have fewer men to feed. On the 14th the beacon was erected and on the 15th finally placed in position. By this time food was running short for all hands, and the coolies had got very tired of their job. Three had left without permission thereby forfeiting the greater part of their pay and on the afternoon of the 16th all the rest struck work. The average foreign Malay who comes to Raub to look for work is not a pleasant person with whom to deal, and if he hail from Tringganu as did most of my men did, his respect for a contract is very precisely measured by the ability of the other party to improve it. Luckily I was a Government officer and although my powers were not perhaps quite so extensive as I represented them to be, I succeeded in sufficiently impressing the men to induce them to go to work again late the next morning. I must own that I to some extent sympathised with them. Their work was pretty hard and their food had come down to rice and salt only. Fish sufficient for twice their number they had finished entirely. (My sympathies were sharpened by the fact that my own diet had fallen to bread and condensed milk.) When on the 18th the salt also gave out I found that I ran a risk of being left alone with my boatmen and a good deal more kit than they could carry. On the 20th therefore I started down although two very large trees up which a ladder had been contrived still stood on the side towards the Gunong. These are only noticeable from the Raub Rest House, whither late on the afternoon of the 21st I arrived, the return journey being done in two days.

During the whole time between the 7th and the 20th the coolies were felling I was taking a round of theodolite angles and sketching the outlines of the hills in sight. The seeing was rarely good especially towards the north-west and south and trigonometrical stations more than 25 miles away could not have been pitched up without the aid of the powerful telescope which

I had fortunately borrowed from the Selangor Survey Office. In clear weather the view was very fine. The hill sloped steeply on all sides except towards the Gunong and seemed to rise out of a level plain. On the north in the dim distance above the spurs of the 'massif' were Gunong Tahan and another noticeable peak since identified at Sinting. On the west the main range ran from Perak down to Jelebu with foot hills below it, and a narrow plain leading from Raub southward to the Bentong and Semantan cut up with long ridges of hills separating the various streams. At the foot of the Gunong were the white limestone cliffs of Gunong Serdam with the Gali plain beyond and Raub with the iron-roofed mine buildings sharply picked out and the cable-track showing like a long angled trench. I managed twice to get bearings of Tahan and to sketch the range of which it forms part. The beacon which I erected stands on the highest of these small peaks of about equal height and the clearing round it measures quite five acres.

The weather was fair only. There was a good deal of rain and on more than one day I never got a single sight. The sun when it shone was very hot and I found that working the theodolite under it meant considerable loss of cuticle from the nose and face. At 8 p.m. the temperature was about 69° and at 6 a.m. 62°. The Malays complained a good deal of the cold although I had provided every man with a blanket. Many of them suffered from chapped lips. My Chinese cook in a blue serge Norfolk suit worn over all his other clothes looked a quaint sight. He never complained however and baked most excellent bread in an empty kerosine tin. A great difficulty was water supply. Every day a water party of five men had to be sent to the last camp nearly 2000 feet down and as the climb was steep and the men out of sight that water party did very little or no other work. Bathing was of course out of the question and washing had frequently to be foregone.

The 'pawang' was a great nuisance. Naturally he did no work himself and I suppose equally naturally he was of no use at all when the men went on strike. He was one of the most self-righteous natives whom I ever met and though quite illiterate fully equalled many a Koran-quoting haji in conceit. As a 'pawang' he did little except to 'Jampi' a man who was bitten



on the foot by a snake on the hill-top. This poor fellow's leg swelled up badly and as he was an oldish man and got high fever I began to be nervous about him. However either the charms or my remedies brought him round and in a few days he could walk again. Occasionally the 'pawang' thought fit to give us a taste of his quality and usually at inconvenient times. At the camp at the foot of the Gunong we heard every night a continuous shrill yelping as of baskets of puppies deserted by their mothers. It was, I think, made by birds though the Malays could give me no name for them. When I asked the 'pawang' he looked mysterious and suggested that the subject should be changed. One night this yelping was very persistent several 'riang-riang' were screeching in the trees, a wind having sprung up the jungle seemed full of noises. I fell asleep but was awakened near midnight by a loud harangue from the 'pawang' to the "hantu" of the Gunong. He began mildly by asking why they made such a disturbance; had they forgotten the propitiatory service he had paid before the first tree was felled? Was it fair to go back on him like this? For a while the noise died down and I heard the men expressing their sense of the 'pawang's' power over the spirits. Soon after however it began again and the pawang after more unavailing discourse lost his temper and scolded the hantu in very unmeasured language indeed. This frightened the men and they kept up a chorus of "Biar-lah," "Jangan-lah," "Nanti dia marah" until finally the pawang was reluctantly pacified and left the hantu alone.

Then they all began to tell ghost stories. One I remember about Bukit Hitam which is full of getah-taban but on which no getah hantu dare collect owing to the tigers which guard the mountain. One man said that his uncle (a particularly brave man) started once with a large party and as a protection kept a ring of fire round the camp at night. Before morning however a tiger sprang through the flames and carried off the leader. This superstition about Bukit Hitam seems only general. I have heard it both sides of the main ridge. The commonest story about high mountains seems to be that they are inhabited by 'beroh' (*macacus nemestrinus*) who increase in size and ferocity the higher the adventurous traveller mounts until at last

they become as lazy as buffaloes. At this point the traveller always returns believing that they would be as large as elephants further on. On Gunong Raja by-the-by there are chili plants sufficiently gigantic to allow these big 'brok' to perch on their branches.

The Malay belief in 'hantu' is of course universal but is noticeable that it is always possible to find some one whether a pawang or otherwise who will have them for a consideration. A charming old Chinese thauke at Belat in Kuantan tells a story of how he offered \$5 to some Malays to fell a large chingah tree which overhung his kongsi. They refused and said that it was a "datoh." Subsequently they offered to fell it for \$10. The thauke's indignant reply was that he would have nothing to do with men who would cut down their grandfather for ten dollars. Why for fifteen you would cut down your father and mother as well! He got over the difficulty by the aid of a large auger half a tin of kerosine and a lighted match. After describing how in a day or two the tree fell its heart completely burnt out, he always ends by saying very scornfully "Mana hantu?" As a rule however a Chinaman believes in propitiating the local unseen powers and even this sceptical thauke was seriously considering whether he could not change his luck by engaging a pawang to pay the belated sacrifice of a buffalo to the genius loci of his mine. A Chinaman is perhaps somewhat of a fatalist but he believes in insurance all the same.

Another superstition which I overheard concerned a cure for skin disease. The pawang was complaining that it was difficult to arrange the marriage of a girl who lived near his house as the poor thing was covered with "kurap." My head-boatman who had noticed the girl, displayed great interest (he was I think contemplating matrimony à bonne marché) and stated that he knew an infallible cure for "kurap." It consisted in an ointment of sulphur and kerosine oil applied in some mysterious manner and it was an essential part of the cure that no living soul should see the patient for seven days after the unction.

As regards the fauna of the hill, over the very top of the ridge, i. e., 5000 feet high ran a beast-track and on almost the highest point was a quantity of rhinoceros' dung. One night whilst

we were on the top an elephant came along this track but was turned back by the fallen trees. It is easy to understand that aborigines walk for choice along the ridges and hills in order to avoid the dense undergrowth in the valleys but why beasts whose weight is calculated in tons should voluntarily carry that weight up hills of really considerable steepness is not so obvious. Do they go along the ridge in order to avoid the sidelong ground of the slopes much of which would give an insecure foot hold? In the present case the track seemed to run towards the Gunong itself nearly 2000 feet higher. On the lower ground we saw many tracks of *sladang* and elephant and heard elephants more than once. Animal life seemed scarce on the hill top. A snake—mutilated beyond recognition before I saw it—was found, also a wood louse and a scorpion. Small bees (*lebah*) however abounded as on all hill-clearings and crawled persistently over one's face and hands. Flies too appeared very quickly and in large numbers. They were in colour a dark metallic blue and in size between a housefly and a blue-bottle. They laid masses of longish white eggs on blankets not actually exposed to bright sunlight. There were also a few white woolly-looking flies of about the same size. None of these insects lived apparently on the spot. They all seemed to appear after the clearing was begun. Whence they came I cannot say. I also saw a few butterflies.

With the aid of a supply of botanical drying paper lent by Mr. Ridley, the Director of the Botanical Gardens, Singapore, I made a large and, I think, fairly complete collection of all trees, shrubs and plants which were at the time in fruit or flower. Mr. Ridley informs me that the collection reached him in good order and he has made out the appended catalogue raisonné of it. It is in fact as an introduction to this catalogue that these notes have been written. From the nature of the moss upon the hill I should imagine that Benom is much drier than the hill tops on the main range. The commonest trees were "*pagar anak*" *bintangor*, *kēlat*, *rengas manak*, *mempassi*, *membungit* and *palāwan*, at least those were the names of them given to me by the coolies. The "*rengas manak*" was not I was told poisonous. My Chinese cook however broke out with a bad eruption on his nose and face probably caused by "*rengas*" sap and on the night



before we started down one of the coolies was very badly stung on the body—so badly indeed that he got high fever and could carry nothing and almost had to be carried himself. I saw him about a week later and the eruption was still visible on his chest. Either therefore rengas proper existed on the hill or else “rengas manak” is not harmless.

The palawan trees were a great nuisance. The wood was so hard that the bliong's in the hands of the less expert coolies were badly gapped and I was obliged to order that one exceptionally good man should tackle them all. The tree seemed to me exactly like the palawan so common on river banks.

On the very top of the hill there was a good deal of “chandan” which Mr. Ridley has identified in a paper recently published in the *Journal*.

Throughout the whole trip I saw no getah, taban, chinga, merbau, petaling, or other valuable timber. On the lowest slopes of the hill there were however many fine “seraia” trees. The whole of the specimens identified by Mr. Ridley were collected on the top of the hill at a height of almost exactly 5000 feet.

The Benom “massif” consists of granite and I noticed that the sedimentary rocks were left behind very soon after leaving the low ground along the foot of the main range; they are found much higher up and in some places higher than 1000 feet above sea level. Benom is an isolated granite intrusion without visible igneous connection with the main-range. In the long plain running southward from Raub the ridges which divide the Klan Bilut and Bentong are from their appearance of sedimentary rock. One of them Gunong Raca which overlooks Bentong township is of course conglomerate. This conglomerate is seen also at Jeram Kapur below Bentong. The pebbles in it are as far as I could see, not of igneous rocks but of quartzite and silicified slate. Its strike is a few points West of North and East of South and its dip (apparently) very steep. Similar conglomerates occur in the Ulu Jelai. The metamorphic limestone cliffs off Serdam at the foot of Benom seem identical in composition with those at Bukit Chintamani on the Bentong river and indeed with all the other limestones scattered, mostly in isolated cliffs throughout the Peninsula. In the Jelai river

this limestone has recently been shown to reach to a depth of over 900 feet below the present surface. The height at which the old sedimentary rocks remain on the east side of the main range as compared with the west is very noticeable when crossing the range by the Pahang Trunk Road. Further I have walked along the foot of the range the whole way from Tramun southward to the Triang (a tributary of the Pahang which rises in Jelevu) and have not only seen no granite but have found the pebbles in the streams to be mostly of sedimentary rarely of igneous rocks. The rocks over which I passed were all sedimentaries. The bed rock of the Bentong alluvial flat where the mines are worked is uniformly not a bed of china clay as is usual on the western side of the Peninsula but a denuded surface of slates on edge.

I was unable to ascertain the name of the hill on which the beacon is placed. It is certainly not Bukit Palas as I passed over Bukit Palas on my way to it. It may possibly be Kluang Terbang. At places however like Raub where no native seems to go into the more inaccessible jungle, local names are very uncertain.

If another attempt is made to fix a station on Benom I would strongly advise that another route be chosen. At Raub labour is very expensive and natives with any idea of local topography are nonexistent. Sakais there are none. Personally if I were to try again I should begin by making enquiries as to routes up the Dong or by the Krau, a tributary of the Jelai on the other side of the 'massif.'

### List of Plants Collected.

*Illicium evenium*, King. Also occurs in Malacca, Selangor and Perak.

*Polygala venenosa*, Juss. var. This is the same plant as that collected by Wray on Gunong Bubu (No. 3813) and distributed under this name by King and is probably the var *gracilis* of Miquel. It is very unlike the ordinary form of the Penang and Perak hills, having a long terminal spike of flowers and not short axillary ones.

*Garcinia*, sp. In young fruit, branches grey corky, leaves lanceolate acuminate coriaceous 2 inches long and one and a half broad, petiole half an inch long axillary or supra-axillary few-flowered petals small, stigma discoid grooved. I have never seen this plant from elsewhere.

*Calophyllum* sp. Of this genus there are two species represented; one is perhaps a form of *C. retusum* the other has oblong blunt leaves. None of the specimens have flowers or fruits, but all have the curious bud-galls common to other species of the genus.

*Anneslea crassipes*, Hook. A big tree; specimens with very large fruit; occurs on Mt. Ophir.

*Adinandra maculosa*, Anders. A variety with smaller leaves than usual and glabrous fruit quite ripe.

*Ternstroemia Scortechinii*, King. Also occurs in Perak.

*Gordonia imbricata*, King. A rare plant once collected by Scortechini, in Perak.

*Ternstræmiaceae*, a very striking plant apparently belonging to the same order but in fruit only was obtained by Mr. Barnes. It is a tree or shrub with dark colored branches, and coriaceous ovate lanceolate leaves with blunt points 1 inch to  $1\frac{1}{2}$  long  $2\frac{1}{4}$  to  $\frac{3}{4}$  inch wide with numerous close nerves and reticulations on the under surface. The upper surface is smooth dark green the under surface yellow when dry and the young leaves are red. The racemes are axillary about one inch long with about ten flowers. The fruit is a capsule on a very short pedicel. With a small rounded bract. The sepals are orbicular imbricate 4 in number, coriaceous with a scarious margin fringed with white hairs, and with three elevated ribs in the centre about  $\frac{1}{8}$  inch long. The capule  $\frac{1}{4}$  inch long splitting into 4 acute lobes on one of which persists the fairly stout style with an obscurely lobed stigma. There is a persistent column in the centre. The seeds are linear curved not winged two in each cell.

The flowers have not been obtained, and consequently it is difficult to refer this with any certainty to

any genus. If as it appears it belongs to the order Ternstrœmiaceæ, it seems most nearly allied to *Pentaphylax* of China.

*Pachynocarpus Stapfianus*, King. Leaves elliptic shortly acuminate blunt base slightly acuminate 6 inches long 3 wide smooth with 6 pairs of nerves depressed above dark brown above, beneath grey with prominent nerves and reticulations, petiole stout  $\frac{1}{2}$  inch long rugose, Panicles crowded compact short red scurfy. Bracts lanceolate scurfy  $\frac{1}{8}$  inch long. Flowers crowded less than  $\frac{1}{4}$  inch long red scurfy, calyx and lobes lanceolate obtuse. Petals linear oblong scurfy. Stamens short ovate apiculate. Fruit solitary globose on a stout thickened pedicel, a little over  $\frac{1}{2}$  inch long, brown rugose, calyx lobes shorter than the whole fruit projecting as short triangular processes.

This tree was only known from a specimen collected by Scortechini, in fruit. It is very satisfactory to have also the flowers.

*Elaeocarpus robustus*, Roxb.

*Bauhinia cornifolia*, Bak. Flowers red.

*Bucklandia populnea*, R. Br. In flower. The leaves in the specimens are not tricuspid but ovate with three prominent nerves and coriaceous. The petioles and nerves on the back hairy or glabrescent, buds ferruginous hairy, the bracts are narrow as in Miquel's figure, in the Flora of Sumatra.

*Weinmannia Blumei*, Planch. In flower and fruit occurs on all the higher hills. Mt. Ophir, Perak.

*Polyosma loete-virens*, Griff.

*Carallia multiflora*, Miq. From description I take this plant to be Miquel's species collected once in Java by Harfield, the exact locality unknown.

*Rhodannia trinervis* Bl.

*Tristania merguensis*, Griff. Very characteristic of our higher

hills. The wood according to Mr. Barnes is exceedingly hard and broke the edges of the axes in felling.

*Eugenia* sp. Leaves very narrow lanceolate with a very long narrow point blunt, coriaceous dotted above, pale beneath one inch long,  $\frac{1}{4}$  inch wide fruit in short axillary and terminal racemes  $\frac{1}{4}$  inch long, small tessellate  $\frac{1}{8}$  inch long.

*E. subdecussata*, Wall.

*Anerincleistus macranthus*, King.

*Medinilla Clarkei*, King.

*Begonia Herveyana*, King. Rhizome stout often rather long creeping. Leaves when young pink adult dark green, petiole over a foot long, blade ovate acute hardly in equilateral base rounded 6 inches long and 5 wide glabrous. Scape six inches long, lengthening in fruit, male flowers numerous about half an inch across, white outer sepals ovate rounded, inner ones narrower, stamens numerous anthers elliptic blunt not apiculate. Fruit fleshy 3-winged, one wing much larger than the other curved obtuse thick  $\frac{3}{4}$  inch long, the others much shorter, deluscing along the base of the wing.

Besides this locality, it has been met with in Pulau Tinggi (Feilding) in Jeram Nyalas (Malacca) by Derry (No. 1130) and in Bukit Sulu (Negri Sembilan). It is called *assam susu* by the Malays.

*Argostemma parvifolium*, Bemi.

*A. hirtum*, Ridl. also occurs on Mt. Ophir.

*Lucenæa* sp. Evidently near *L. pentacme* of Stapf from Kinabalu, resembling it in the white bark of the stem and almost nerveless leaves but the peduncle of the head is longer and the bracts at the base are not connate in a cupule as in that species. The only species recorded from the peninsula is *L. Morindæ*, Jack. which is common in Singapore. This species is evidently undes-



cribed but as Sir George King is at present at work on the *Rubiaceæ* and probably has already seen it, I do not give it a name.

*Timonius Tambosella*, Tha.

*Cephaelis cuneata* var. *debilis*. A more slender plant than the usual form with smaller narrow lanceolate acuminate leaves 3 to 4 inches long and one inch wide or less, petiole  $\frac{1}{2}$  to 1 inch long. In fruit this seems to be a weak form of this species of which the common form often occurs high upon our hills.

*Lasianthus* sp. With lanceolate acuminate leaves strongly reticulate beneath nerves, petioles, and twigs hairy.

*Ardisia villosa*, Roxb.

*A. oxyphylla*, Wall. A variety with smaller oblong to ob-lanceolate leaves.

*Linociera lancifolia*, nsp. Branches pale, leaves opposite lanceolate acuminate, base cuneate 2 to 3 inches long  $\frac{1}{2}$  to 1 in. wide smooth, thinly coriaceous nerves inconspicuous on the upper surface, midrib elevated beneath, nerves alternate ten on the lower surface. Panicles small an inch long with a pair of broad oblong bracts  $\frac{1}{4}$  inch long at the base. Flowers  $\frac{1}{8}$  inch long umbellate on the ends of the branches, pedicels  $\frac{1}{8}$  inch long, calyx lobes short ovate puberulous, corolla tube very short lobes linear obtuse from a broad base keeled glabrous. Stamens 2 short broad. Style thick shorter than stamens. Drupe cylindrical acute.

*Alyxia pumila*, Hook fil. A form with larger leaves and fruits than usual. Calyx lobes puberulous.

*Dischidia coccinea*, Griff.

*Hoya* sp. near *H. parasitica*, but with much smaller thinner flowers. I have it also from Gunong Hijau in Perak.

*Vaccinium bancanum*, Miq. A variety with small leaves and fruits.

*V. Teysmanni*, Miq. var. with branches and petioles and base in midrib beneath covered with black hairs. According to the description the typical form is glabrous. I have obtained it also on Maxwell's Hill, Perak, where it was epiphytic and had pink flowers.

*Rhododendron Malayanum*, Jack.

*Diplycosia urceolata*, Stapf, var. This differs only from the plant described from Kinabalu in the leaves being ovate lanceolate and rather larger as much as 4 inches long by two wide, instead of obovate. The form of the leaves however seems rather variable. I have also met with it on Bukit Kutu and Bukit Hitam in Selangor. *D. macrophylla* of Beccari a native of Borneo is as far as description goes similar except in the leaves which more resemble those of the Peninsula plant.

*D. lancifolia*, nsp. Shrub with rather slender branches with whitish bark upper part setulose, leaves coriaceous lanceolate to ovate lanceolate acuminate, base narrowed to the petiole shining green above. Midrib and two side nerves depressed visible, beneath paler dotted midrib only visible raised.  $1\frac{1}{2}$  inch long  $\frac{1}{4}$  to  $\frac{1}{2}$  inch wide. Flowers solitary axillary on slender pedicels nearly half an inch long with red setulose bristles. Bracts 2 short ovate pubescent. Calyx campanulate narrowed at the base lobes ovate acute with red hairs,  $\frac{1}{4}$  inch long. Corolla longer glabrous. Stamens with long points opening by two pores yellow. Style rather long slender.

*D. consobrina*, Becc. A specimen collected by Mr. Barnes resembles the description of this Bornean plant.

*Gaertnera Koenigii*, Wight.

*Aeschynanthus Hildebrandtii*, Hook fil. Also occurs in Perak.

*Ae* sp., possibly a variety of this but with ovate acute leaves, and a bigger plant than I have seen of the species. The specimen is in fruit.

*Didymocarpus* near *albomarginatus*, Hemsl., but with leaves narrower at the base, in very young bud only.

*Clerodendron deflexum*, Wall. It is not usual to get this common low country plant at such an elevation.

*Nepenthes sanguinea*, Lindl.

*N. gracilis*, Korth.

*Litsea* sp. A narrow leaved species near *lancifolia* but glabrous; in fruit.

*Micropora Curtisii*, Hook fil.

*Wikstrœmia candolleana*, Meisn. The Chandan of Pahang. This species is not recorded for our flora in the Flora of British India, but occurs on Gunong Hijau, Kedah Peak, and also at Kamposa in Kelantan. It is a shrub or small tree about 6 to 10 feet tall with smaller flowers than those of *W. indica*.

*Loranthus evenius*, Bl. This beautiful red flowered mistletoe occurs also in Singapore and in Perak.

*L. tetragonus*, Bl. New to the Peninsula.

*Henslowia buxifolia*, Bl. Not rare on our hills.

*H.* sp., near *Lobbiana*. Leaves ovate orbicular 2 inches long by one wide tapering into the petiole which is  $\frac{1}{4}$  inch long, nerves five faintly visible on the under surface. Fruits two or three together axillary on pedicels half an inch long, oblong light brown  $\frac{1}{2}$  an inch long, crowned by five short connivent calyx teeth; obscurely five grooved. This is remarkable for the large size and shape of the fruit. I have not seen it elsewhere.

*Balanophora multibrachiata*, Jungh. Also occurs on Mount Ophir.

*Ficus diversifolia*, Bl. A form with elliptic oblong leaves and small pedicelled figs.

*F. fulva*, Reinwaldt.

*Quercus Rassa*, Miq.

*Podocarpus cupressinus*, Bl.

- Burmannia longifolia*, Becc.  
*Dendrobium sinuatum*, Lindl.  
*D. bifarium*, Lindl.  
*D. Kelsalli*, Ridl.  
*D. macropodum*, Hook fil.  
*D. hymenopterum*, Hook fil.  
*D. cornutum*, Hook fil. A rare plant with good sized pink flowers originally collected by Wray in Perak.  
*Bulbophyllum capitatum*, Lindl.  
*B. catenarium*, Ridl.  
*B. montigenum*, Ridl. Also on Kinabalu.  
*Eria vestita*, Lindl.  
*E. æridostachya*, Rehb. fil.  
*E. bidens*, Ridl.  
*E. longifolia*, Hook fil.  
*E. Scortechinii*, Hook fil.  
*Ceratostylis clathrata*, Hook fil.  
*Dendrochilum angustifolium*, Ridl. nsp. Occurs also on Bukit Hitam, Selangor.  
*D.* sp. in fruit only.  
*Coelogyne tomentosa*, Lindl.  
*C. sulphurea*, Rehb. fil.  
*C. carnea*, Hook fil. This plant occurs in Perak also there is a figure of it in the *Icones Plantarum* which however represents the petals as fine as and very much broader than they actually are, so that the plant is nearly unrecognizable. I have however a specimen from Scortechini's collection distributed as typical *C. carnea* and a good pencil drawing by Scortechini showing the very narrow petals and labelled *C. carnea* by Hooker. The flowers are neither fleshy nor flesh-colored as the name would imply but rather thin textured even for a *cœlogyne* and brown and yellow.

*Pholidota gibbosa*, De Vr. This Javanese plant has not previously been recorded for the peninsula. It seems to be very closely allied to *P. carnea*, chiefly differing in the broad three-nerved petals.

*Calanthe augustifolia*, Lindl. This pretty white *Calanthe* grows on all our high hills.

*Saceolabium bigibbum*, Hook fil.

*Corysanthes picta*, Bl.

*Smilax calophylla*, Wall.

#### FERNS.

*Humata pedata*, Sm.

*Lindsaya scandens*, Hook.

*Hymenophyllum Neesii*, Hook.

*Hymenophyllum polyanthos*, Sw.

*Polypodium cucullatum*, Nees.

*Pleopeltis Wrayi*, Baker.

*Elaphoglossum latifolium*, Sw.

*Vittaria falcata*, Kze.

Also an *Alsophila* without fruit.

*Selaginella chrysorrhiza*, Spring?

The two typical hill Mosses *Pogonatum macrophyllum* and *Hypnodendron arborescens* also occurred in the collection.

H. N. Ridley.