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“Nature never hurries; atom by atom, little by little, she achieves her work.”

EMERSON.

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similar to that of *Psylla*, yet the peculiarity of the form and length of the face-lobes seem to indicate that it ought to be dealt with as a member of a sub-family, to be called *Licillinæ*. As for the latter (*Spanioneura*), it is somewhat remarkable in its structure, partaking, as it does, of the characters of *Psylla* and *Trioza* combined. From *Psylla* it differs in having lanceolate elytra, as in *Trioza*; and from *Trioza* in having a petiolate cubitus, as in *Psylla*. Here, also, I think are sufficient grounds for the formation of a new sub-family, under the name of *Spanioneurinae*.

In the "Meddel. af Soc. pro Fauna et Flora fennica," 5 (1880), Dr. O. M. Reuter, in his enumeration of the *Hemiptera* of Åbo and Åland, observes the nomenclature of Dr. Löw in respect of the *Psyllina*, which are mostly the same species as in Britain.

Lee, S.E.: 2nd January, 1882.

ENTOMOLOGICAL NOTES FROM TENERIFFE, ST. VINCENT, &c.

BY GERVASE F. MATHEW, R.N., F.L.S., F.Z.S., &c.

We arrived at Teneriffe on the 17th December, and on the following afternoon I went for a walk, taking the road from Santa Cruz towards Laguna, in the interior, the ancient capital of the island. The country passed through was very rough, dry, and rocky, the small fields being divided by loose stone walls, reminding one of Malta. The only things under cultivation, at this time of the year, appear to be spring onions and prickly pears. There were a great many acres of the latter, which are grown for the purpose of rearing the cochineal insect. In one place there were a number of women busily engaged covering the leaves with muslin. The parent insects, so I was told, are kept in sheds, built for the purpose, and deposit their ova on the muslin, which is then cut into pieces about six inches square. These pieces are then wrapped round a leaf of the prickly pear, and their ends fastened to the leaf with the sharp thorns picked from the plant itself. The little creatures when they are hatched crawl from the muslin on to the leaf, and the muslin afterwards serves as a protection from wind and rain. The insects take three or four months coming to maturity, when they are shaken off, baked, and dried, and are then ready for exportation. There are two "crops" in the year, but the first is generally a light one.

Laguna is some 2000 feet above Santa Cruz, from which it is distant about seven miles, so it was uphill work, and, as I did not feel inclined to go the whole way, I stopped, after walking about four miles, and rested, and admired the beautiful view, and then returned to the town. As I did not expect at this time of the year to see any insects about, I took no net with me, so, in consequence, noticed many large dragon-flies, two or three *Macroglossa stellatarum*, and a number of *Pieris Daplidice*, and also picked up an uninteresting-looking *Noctua* larva, much resembling that of *Agrotis exclamationis*,* crawling on the dusty road. The next morning I landed with one of my brother officers for a drive to Laguna, and upon reaching the mole, we found a carriage which we had previously ordered waiting for us. It was a queer-looking conveyance, of ancient date, and had three horses attached to it abreast. The day was simply perfect: cloud and sunshine, the latter preponderating, with a deliciously balmy breeze. The road between the two towns was a capital one, and our three little horses took us along merrily, although it was uphill the whole way. We reached Laguna about half-past one, and found it a dreary, dirty-looking town, with much grass growing in the wretchedly-paved streets. After driving about in the town for a short time, we went right through and found the country beyond flat and well cultivated, and in some places looking beautifully green. We drove on for about a mile between something almost like hedges, and then stopped, got out, left our carriage in the road, and walked about for an hour or so. I put my net together at once, and had only just done so when a brown butterfly flitted by, and was netted, and I was pleased to find that I had captured a fine *Lasiommata Xiphia*, and seven others were soon obtained. They were evidently just coming out, for they were quite fresh and in beautiful condition. Besides these, *Pieris rapæ* and *Daplidice* and *Chrysophanus Phlæas*—the latter with much larger black spots than in British examples—were taken, and several *Pyrameis cardui* seen. The country this side of Laguna was very pretty, and after walking on until we could see the sea the other side of the island, we returned to our carriage and drove back to Santa Cruz.

On 24th December, we arrived and anchored off the estuary of the river Ouro, on the West Coast of Africa, in lat. 23°, 40' N., and remained until the 29th. This locality, I expect, has never been visited by an entomologist; and from the ship, entomologically speaking, the aspect was most desolate, nothing as far as the eye could reach but

* On the 16th January this larva produced a fine *Agrotis*, unlike any species with which I am acquainted.

sandy desert—in fact, the great Sahara. While here I went on shore several times shooting (birds were very numerous), and found the country was no better than it appeared from the ship: stunted bushes of mesembryanthemum, saltwort, stonecrop, &c., grew at intervals on the sandy beach, and on the desert beyond, the same plants, in a more dwarfed form, and a few others I did not know, occurred. A diligent search at the roots of these plants resulted in the discovery of one small beetle (a *Dermestes*) and the larva of another (*Cicindela*), and a few larvæ of an Orthopteron. But a large dragon-fly (*Anax* [*Cyrto-soma*] *ephippiger*) occurred in the greatest profusion, which is strange when one bears in mind that these insects in their larva-state pass their existence in fresh water, of which there were no signs whatever in the neighbourhood, nor had there apparently been any rain for months. The river Ouro seems to be a river in name only, for an exploring party from the ship which went to the head of the estuary—some twenty miles or more inland—could discover no trace of fresh water. These dragon-flies flew off to the ship in considerable numbers, and at night might be seen reposing on the various ropes. One evening, shortly before dusk, I landed on the sand-ridge, at the mouth of the estuary, and found the dragon-flies had congregated in vast numbers on the bushes, and I noticed that they invariably selected the branches to leeward of the bush.* Only one species of butterfly, the ubiquitous *Pyrameis cardui*, was noticed. No traces of the ordinary food-plants were visible. Three different kinds of moths were obtained: a fine *Charocampa celerio* at rest (the larva of this insect feeds, I believe, exclusively upon vine); *Heliothis armiger*, whose larvæ I have taken feeding in flowers of thistles and henbane; and an *Agrotis*, near *ripæ*, whose larvæ, probably, feed on *Sedum*, and other plants growing on the sands.

We left the river Ouro on 29th December, and arrived at St. Vincent, Cape de Verde islands, on the afternoon of 2nd January. From previous accounts I had had of the island, I expected to find nothing but a barren, dry rock, so was agreeably surprised to see an abundance of green scrub to the westward of the town, and plenty of green and golden patches among the hills. The next day I went on shore, and walked out to the westward of the town, where I found that the scrub was composed chiefly of tamarisk with mimosa and cassia, and several other trees and shrubs I did not know. The golden-

* The name of this dragon-fly has been supplied by me, from a specimen forwarded by Mr. Mathew. It is essentially a migratory species, sometimes flying over to the European shores of the Mediterranean, from Africa, in large swarms; this will account for its appearance in such numbers in a place in which it could not have been bred.—R. McLACHLAN.

green patches were caused by a densely growing *Sedum*, whose bright yellow and sweetly smelling flowers were just coming into bloom. There were also large patches of *Chenopodium* growing luxuriantly among the tamarisk and elsewhere, and near the shore *Suaeda maritima* and *Beta maritima* in plenty. Among the *Chenopodium*, a *Pyrale*, which seems identical with a species I have taken in Peru, was abundant, and I also obtained a single example of another species of *Pyrale*, which I have likewise taken both in Brazil and Peru. Unfortunately, it was a dull afternoon, with frequent misty showers, and only a gleam of sunshine at rare intervals, and a strong breeze blowing. It always blows here, I believe. During the gleams of sun, I noticed two kinds of butterflies: a *Pieris*, which looked uncommonly like *rapæ*, and which I missed shamefully several times, and two specimens of an obscure little *Lycæna*. Among the *Chenopodium* I obtained five small and prettily marked *Pterophori*, and from the tamarisk bushes a plume which appears to be identical with *Agdistis Bennetti*.* Among the same bushes there were numbers of a dull coloured *Scoparia*, and a very small whitish *Tinea*, but the moment they were dislodged with the beating stick, they were blown away by the strong wind, and I was only able to secure a couple of them. Two species of dragon-flies were plentiful, but also, on account of the wind, difficult to catch, and I obtained but two—one possessing a bright claret coloured body, and the other dull golden-green—perhaps, sexes of the same species. Besides the moths mentioned above, I secured a pretty little yellow *Noctua*, allied to *Micra*, and two species of *Geometer*. In the seed-pods of *Cassia*, a *Tortrix* larva was plentiful, and I gathered a couple of dozen of them.† *Coleoptera* and *Hemiptera* were very scarce, but *Orthoptera* were abundant, and I noticed many species, besides hearing them all around me. The *Hymenoptera* were represented by a single large, dark blue, ichneumon-like insect, having large, bright yellow antennæ, which made it very conspicuous on the wing. They were busy collecting honey from the flowers of the *Sedum*. We left St. Vincent on the 4th January for Cape of Good Hope, where we shall remain for about a fortnight, and then proceed to Australia.

H. M. S. "Espiègle," at Sea:
27th January, 1882.

* *A. tamaricis*, ?.—Eds.

† I placed these pods in a large wide-mouthed bottle, and in a day or two observed many of the larvæ had crawled to the sides of the bottle and were hanging, dead, and, upon examination, I found all the pods covered with mildew, and every larva dead. One which I placed in a small pill box by itself, for the purpose of figuring, spun a cocoon of fine white silk, and on the 20th January produced a moth.—G. F. M.