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Considerations upon the fixation of the limits between the species and the variety, founded upon the study of the European and Mediterranean species of the hymenopterous genus *Polistes* (Latr.)

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garded as a diffused vitellogene, analogous to that indicated in other Cotylide worms.

The *Pontobdella* envelopes its ovum in a cocoon fixed by a pedicle to submarine bodies; this is figured by Hesse and Van Beneden, but from an altered specimen, unless it belongs to a different species. The animal embraces the cocoon with its anterior disk to complete and fix it. Hence, and from the facts observed in other species, the author concludes that the so-called salivary glands furnish the material for this protective envelope of the ova.—*Comptes Rendus*, July 13, 1868, pp. 77-79.

Considerations upon the fixation of the limits between the Species and the Variety, founded upon the study of the European and Mediterranean species of the Hymenopterous Genus Polistes (Latr.). By M. SICHEL.

I. For several years the question of the mutability or immutability of the species has been afresh brought under discussion, and vividly attracts the attention of zoologists. Nothing can contribute more to exhaust this question and to pave the way to its solution, by aiding powerfully to fix the limits between the species and the variety, than the profound study and exact statistics of certain genera of insects richly represented in individuals, and possessing a sufficient number of species common in our climates to allow us to study them on a large scale in regular and complete series. Series captured in the nests especially, by permitting the comparison of allied species and the exact observation of the transitions between each species and its varieties, will singularly facilitate our conclusions, and give them a high degree of certainty.

Such a genus is the Hymenopterous genus *Polistes*, represented in the whole of Europe, in Algeria, and in the western part of Asia by four species (three of which are very common even in the environs of Paris), viz. *P. gallicus*, *biglumis*, *diadema*, and *Geoffroyi*.

II. But these last three species are identical with *P. gallicus*, and only differ from it as varieties. It is this opinion that I endeavour to establish here by numerous and, I think, convincing proofs, in order to show for once how the study of the Hymenoptera on a large scale and on the living animal may contribute to fix the limits between the species and the variety.

III. The above four species may be well characterized; but their diagnostic characters are neither constant nor essential, as is proved by the following propositions, deduced from long-continued and accurate observations:—

1. The subvarieties are so numerous that we may at pleasure create new varieties among them.
2. The transitions between the different varieties are so frequent and so insensible that it is often impossible to say where one variety or subvariety ends, and where the next one commences.
3. In the same nest we see hatched simultaneously or successively

the different varieties and subvarieties, especially *P. gallicus*, *biglumis*, and *Geoffroyi*, with all the passages from one to the other.

4. Among the numerous individuals of *P. biglumis* that I have captured or bred from nests, I have never been able to find a female. The females revert more or less to the characters of *P. gallicus*, or are replaced by the female of the latter.

5. Nor does the male of *P. biglumis* exist; it always, more or less, presents the characters of *P. gallicus*.

6. From this it follows that *P. biglumis*, according to the most accurate observation made upon large series and numerous nests, is only a peculiar modification, a variety, of *P. gallicus*.

IV. Observations upon the exotic species of *Polistes* lead to perfectly analogous conclusions.

V. To sum up, the exact and serial observation of the genus *Polistes* serves marvellously to prove that the mutability of the species, in zoology, although very great as to its varieties, does not extend beyond these, and does not attain to the production of specific types when these are well defined and correctly established.—*Comptes Rendus*, July 13, 1868, pp. 75–77.

On a new Species of Chirogalus from the West Coast of Madagascar.
By M. A. GRANDIDIER.

Chirogalus Samati (nob.). Obscure fusco-griseus, subtus fulvescens.

Cauda crassa, obsolete rufescente; fascia alba a fronte media ad nasi apicem decurrente; oculis nigro circumdatis; auriculis paulo longioribus quam *Chirogali Milii*.

Long. ab apice nasi ad caudæ basin 19 centim.; caudæ 17 centim.
Habitat flumen Tsidsibon, in littore occidentali Madagascar insulæ.

This *Chirogalus* is specially remarkable by its head, which resembles that of a young cat, and by the size of its tail, which is 6 centimetres in circumference; it owes this size, which is abnormal in the Lemurids, to the presence of a thick layer of fat, similar to what occurs round the tails of the Cape sheep.

The hair of the body, as well as that of the tail, is rather short. It is known to the natives by the name of Kéli-bé-houï.

I have named this animal after M. E. Samat, who has resided for the last twenty-two years on the west coast of Madagascar, and from whom I have received great kindness during my stay in these inhospitable regions. To him I owe my acquaintance with this curious Lemurid and the two specimens which I have forwarded to the Paris Museum.

I avail myself of this occasion to make known a curious fact which the beautiful collections recently brought from the north-west coast of Madagascar by the skilful keeper of the Musée de Bourbon, M. Lantz, have enabled me to verify, viz. that *Berniera major* and *Berniera minor* are but one species: *B. major* is the male, *B. minor* the female. M. Lantz has taken some fifteen of each animal in the same locality, and ascertained that they lived together.

Saint-Denis, Ile de Réunion, Dec. 18, 1867.

Ann. des Sciences Nat. viii. p. 294.