

with *Heterodactylus*, affords a striking confirmation of the correctness of these conclusions. As may be seen from the drawing (fig. A, p. 352), the scaling of the reproduced tail of *Gymnophthalmus* is that of a *Heterodactylus* or Cercosaurine Teioid.

Another example (see fig. B, p. 352) is afforded by the tail of *Ophisaurus* (*Pseudopus*), a genus which I have, following Cope, placed in the same family as the Slow-worm (*Anguis*). Here we have a Lizard with verticillate scales, the tail of which, when reproduced, assumes the cycloid scaling of its Diploglossine and, no doubt ancestral, allies.

According to the taxonomic arrangement of all the older and of many modern authors, such tails as are represented in the above figures exhibit, on the same individual, a 'chassé-croisé' of the characters of two primary divisions, viz. the "*Cyclosaura*" (normal tail of *Ophisaurus* and reproduced tail of *Gymnophthalmus*) and the "*Geissosaura*" (normal tail of *Gymnophthalmus* and reproduced tail of *Ophisaurus*).

It will be useful in future to pay greater attention to the scaling of the renewed tails of Lizards, as it may, in some cases, afford a clue to the affinities of genera or species to one another.

#### 4. Note on the Sternal Gland of *Didelphys dimidiata*.

By FRANK E. BEDDARD, M.A., Prosector to the Society.

[Received June 5, 1888.]

At a recent meeting of this Society (see P. Z. S. 1887, p. 527) I described the external appearance and the minute structure of a peculiar gland in *Myrmecobius*, situated just above the anterior end of the sternum.

I have now to record the presence of a gland occupying a similar position in another Marsupial, viz. *Didelphys dimidiata* (Wagner). Mr. Thomas has directed my attention to the presence of this gland and requested me to report upon its minute structure.

One of the drawings which I now exhibit (fig. 1, p. 354) represents the head and anterior region of *Didelphys dimidiata* and shows the position of the sternal gland.

The second drawing (fig. 2) represents the gland magnified more highly.

The integument in this region appears to the naked eye to be entirely devoid of hairs, and the skin is furrowed in various directions. The latter figure may be compared with fig. 2 of my paper upon the sternal gland of *Myrmecobius* (P. Z. S. 1887, p. 528). The orifices of the glands upon the exterior are by no means so plain as in *Myrmecobius*. It is of course possible that the appearance of the glandular patch in *Didelphys* owes its difference from the appearance of the corresponding structure in *Didelphys* to the state of contraction of the skin—caused by the alcohol in which the animal was preserved.

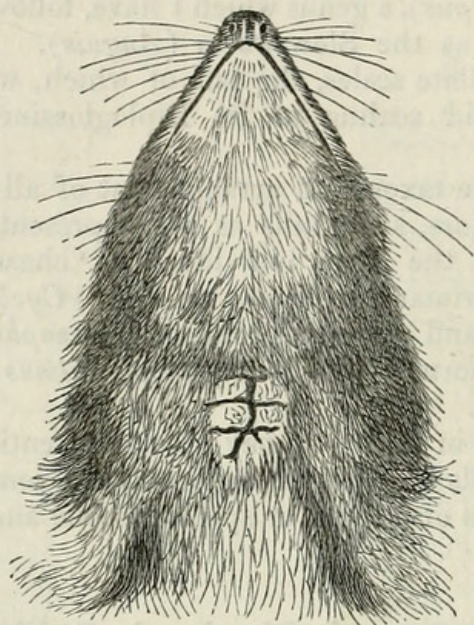
In *Myrmecobius* the glandular patch upon the integument had a



smooth appearance and the mouths of the glands were widely dilated.

In *Didelphys* the skin in this region of the body was much

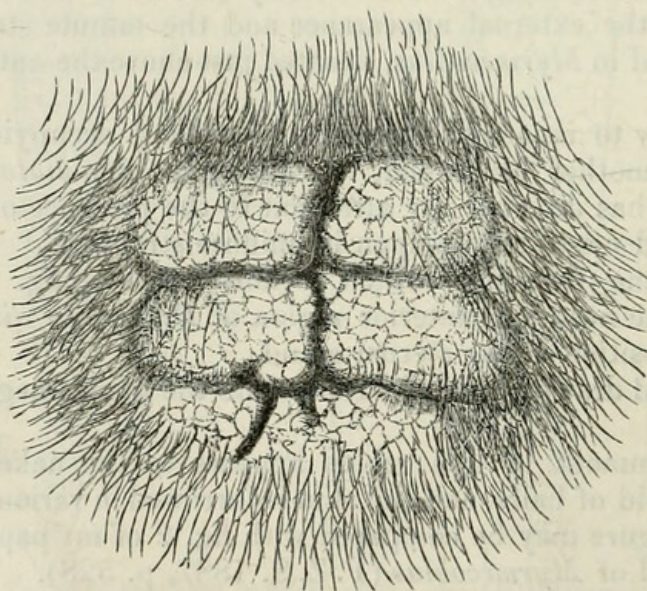
Fig. 1.



*Didelphys dimidiata.*

Ventral view of head and neck, to show the sternal gland.

Fig. 2.



*Didelphys dimidiata.*

Sternal gland, more highly magnified.

wrinkled, and the mouths of the glands were not apparent. This looks very much as if the difference were merely due to the more contracted



condition of the integument in *Didelphys*; and I cannot find any reasons for believing that the integumental glands, which will shortly be described, are any smaller in *Didelphys* than in *Myrmecobius*.

Apart, however, from the question as to whether the external appearance of the glandular patch in *Myrmecobius* is really different from that of *Didelphys dimidiata*, there is a close agreement between the two species in the microscopic structure of the gland. The sternal gland of *Myrmecobius* is a complex structure. The epidermis in this region is greatly thickened and contains numerous sudoriferous glands grouped together into oval masses. Beneath the dermis is a large compound gland the structure of which resembles the sudoriparous glands.

In *Didelphys dimidiata* the elements entering into the formation of the glandular patch are precisely the same as in *Myrmecobius*. As in that species, there are a few hairs scattered over the surface of the gland which are too small and too few to be recognized by the naked eye. The same groups of modified sudoriparous glands as those which I termed sudoriparous follicles in *Myrmecobius* occur in *Didelphys dimidiata*. And, finally, underneath the dermis is a compound tubular gland which, however, appears to be relatively smaller than in *Myrmecobius*.

To describe these various glandular structures more in detail is unnecessary, as such a description would be a mere repetition of the greater part of my paper upon *Myrmecobius*.

It is interesting to find that there exists in both these genera, which are not in other respects very nearly related, a glandular apparatus having the same anatomical relations and the same minute structure<sup>1</sup>.

## 5. Note on a new Gregarine.

By FRANK E. BEDDARD, M.A., Prosector to the Society.

[Received June 5, 1888.]

The Gregarine described in the present note was found in a *Perichæta* which has recently been sent to me from New Zealand by Mr. W. W. Smith. This species occurred in the *vesiculæ seminales* and in the body-cavity, and is a large Gregarine, reaching a length of  $1\frac{1}{2}$ –2 millim. I observed three stages in the development of this parasite, which I cannot identify with any described form.

The smallest examples that I observed were about the same size as the common *Monocystis lumbrici*, but of a different form, which is illustrated in the accompanying woodcut. The body is globular, and furnished with one or two slender processes usually of greater length; they are placed (if there are two) one at each end of the body, so that the Gregarine has the appearance of a bead strung upon a thread. I only observed individuals of this stage in the *vesiculæ seminales*. The body-cavity of the *Perichæta* was crowded

<sup>1</sup> P. Z. S. 1887, p. 527.



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