

being closely applied to it. Here likewise it must be ascertained whether the presence or absence of the spine is a constant specific character.

A peculiar pointed projection of the face, sometimes straight-conical, sometimes curved at the tip, which occurs in some species, was taken by Wiedemann, in connection with a peculiar structure of the palpi, as a character of the genus *Rhaphiorhynchus*. Later, species were discovered in which this projection exists, while the palpi show the ordinary structure. Is this beak a constant character in the same species? If it exists in the female, does it also necessarily appear in the male? The latter is the case with specimens of *Rhaphiorhynchus planiventris* before me. But I have seen in the British Museum a female *Acanthomera* which I would feel inclined to place with a male in the same collection, but for the beak which exists in the former and not in the latter. There seems to also exist a correlation between the beak and the subfemoral spine. *A. magnifica*, Walk., *A. frauenfeldi*, Schin., *A. picta*, Wiedem., and some unnamed species which I have seen in collections have both the beak and the spines; they seem to form a natural group, distinguished by a more slender body and more projecting humeral callosities. It remains to be seen whether these coincidences are constant.

The sides of the abdomen in some specimens have sharp edges, generally beset with a more or less dense fringe of hairs easily rubbed off. These sharp edges are produced by the expansion of the dorsal abdominal plates beyond the membrane connecting them with the ventral plates. In other specimens the sides of the abdomen are blunt, and look as if the sharp edges had been bent under or crumpled. It seems evident to me that this difference is not merely accidental, produced in the process of drying, but that it is a real, specific, or may be generic difference. I believe even that I notice a certain degree of coincidence between the presence of the sharp edges and the absence of subfemoral spines and of facial projections. This point remains also to be investigated. If a generic subdivision should be attempted, the name *Acanthomera* should be retained for the group with rounded edges and subfemoral spines, and *Pantophthalmus*, Thunb., the older name, for the species with sharp edges.

The breadth of the front in the female should be noted; it seems to be a good distinctive character between closely allied species. The comparative size of the head of the male and the structure of the hind femora, sometimes linear, sometimes attenuated at the base, and slightly club-shaped on the latter half, also offer characteristic differences.

The arrangement of the stripes and spots on the thorax, an apparent monotony notwithstanding, offers excellent characters for the recognition of the species, and especially for the assorting together of male and female specimens of the same species. They should therefore be carefully described, and, if possible, figured.

The genus *Rhaphiorhynchus* is based on the peculiar structure of the palpi, which are stout and pointed, and not linear as in *Acanthomera*. These palpi, so far as I can judge from male and female specimens of *R. planiventris* before me, are in the male fusiform, and end in a straight point (correctly represented by Macquart, Dipt. Ex.