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LI.—*Nomenclature of Genera &c. in the Oribatidæ.*

By A. D. MICHAEL, F.L.S. &c.

DR. A. C. OUDEMANS, of Arnhem, in the 'Tijdschrift voor Entomologie,' Deel xliii., some time since published a paper which, although short, displays a considerable amount of industry and ingenuity; it is called "Remarks on the Denomination of the Genera and Higher Groups in 'Das Tierreich, Oribatidæ.'" It is a criticism upon the names of genera and subfamilies as used not only in 'Das Tierreich,' but in most instances in almost every modern work of any authority. I regret that the pressure of other engagements has prevented my answering it before. If we were obliged to adopt the alterations suggested by Dr. Oudemans, it would be little less than a misfortune, as they would introduce endless confusion by interchanging the generic names of the best-known genera, so that it would be almost impossible to say in what sense any particular author used any of these generic names. Luckily Dr. Oudemans's enthusiasm has, I think, led him to overlook very sufficient reasons why this disastrous course should not be adopted.

A large portion of what seem to me the errors of Dr. Oudemans's paper arise from the idea that the descriptions given by Linnæus and other early authors were sufficient to identify species by; whereas, as a rule, they were not distinct enough even to identify families. Although the names have often been preserved by far later authors out of respect to the earlier men and a desire to retain some record of their work, yet the definition and allotment of the name must be almost always looked upon as that of the later author, while the creature which the earlier author really spoke of remains entirely uncertain.

Dr. Oudemans says that the well-known name of the genus *Oribata* must be changed into *Notaspis* (which is a name known for a different genus), the name of the subfamily following it, because he says that "in all his works Latreille tells us that the type of his genus is *Acarus geniculatus*, Linné (a *Damæus* of 'Das Tierreich')." The passage just quoted seems to me to contain a double error. Firstly, Latreille did not tell us so in all his works, he did in some of them; but he varied his types from time to time in a very puzzling manner. Thus, although in 1802 in Buffon's Hist. nat. éd. Sonnini, Ins. vol. iii. p. 65, which was probably the first time he used the name, he says of the almost undefined genus, "Example *A. geniculatus*, Linn.," yet in the following year, 1803, in his next work, 'Nouveau Dictionnaire

d'Hist. nat. appliquée aux Arts,' vol. xvi. p. 349, he simply says that he has carried to the genus *Oribata* *A. coleopratus* and *A. geniculatus* of Linnæus, putting *A. coleopratus* first; and in 1804, in Hist. Nat. des Crust. et des Insectes, t. vii. p. 400, he says: "We have made known the genus *Oribata* by describing the *Acarus corticalis* of de Geer." Latreille no doubt thought that the *A. geniculatus* of Linnæus was the same species, but really it was not. Even if Latreille had told us in all his works that *A. geniculatus*, Linn., was the type of *Oribata*, it would not have been good, firstly, because he could not make it the type of *Oribata* in 1802 when he had already made it the type of *Acarus* in 1796, in 'Précis des Caractères génériques des Insectes disposés dans un Ordre naturel.' As to this, Dr. Oudemans says that Latreille created a genus *Acarus* with *Acarus geniculatus*, Linn., as type, "but that as *Acarus* was already preoccupied by Linnæus with *Acarus siro*, Linn., as type, *Acarus*, Latreille, must fall." It does not seem to me correct to say that Latreille created or attempted to create any new genus; he simply divided the Linnean genus *Acarus*, which included the whole of the present order Acarina as far as Linnæus knew of it. Having divided off the genus *Tyroglyphus* with *A. siro*, Linn., as type, and other genera, he left *A. geniculatus* as type of the remaining species, for which he retained the generic name of *Acarus*, a name which has been conveniently and properly dropped by modern acarologists because it has been raised into an order, and it was not possible to say what ought to constitute the genus if it were retained. As to *A. siro*, Linn., being the Linnean type, as Dr. Oudemans says, it is difficult to see upon what he founds this contention. Linnæus does not in any way indicate that it is the type, and neither in the 10th edition (1758) nor in the 12th edition (1767), which are the only two editions of the 'Systema Naturæ' taken as the origin of nomenclature by anybody, does *A. siro* appear as the first species; *A. elephanti* is the first, then follow other Ixodidæ, and *A. siro* is the 15th. Secondly, if *A. geniculatus* had been the type of *Oribata*, that type would have been bad because it is not possible to say what species the *A. geniculatus* of Linnæus was, or even what family it belonged to. The Linnean description was "*Acarus niger, femorum geniculis sub-globosis*"; this is all, and is manifestly insufficient. What creature, if any, Latreille supposed the *A. geniculatus* of Linnæus to be it is not possible to determine; it certainly was not the creature which we now call *Damæus geniculatus* and allot to Linnæus's name, because in 1804, in 'Hist. Nat. générale et particulière d. Crust. et des Insectes,' Latreille says that his *A. geniculatus* is the same

as *Acarus corticalis*, de Geer, t. vii. pl. viii. fig. 1, which certainly is not what we now call *D. geniculatus*, and is not a *Damæus* at all, and which cannot well have been Linnæus's species, because, meagre as the Linnean description is, it is inconsistent with *A. corticalis* of de Geer. The fact is that no one can say, even approximately, what the *A. geniculatus* of Linnæus was. Latreille evidently did not know any better than we do, and he mixed up several totally inconsistent species under the name. It was only in 1835 that C. L. Koch described a species in a manner which could be recognized, and adopted the Linnean specific name and the genus *Damæus* for it; but this cannot affect priorities in 1802-1803; and there is not any reason to suppose that it is the Linnean species. *A. geniculatus* having failed as a type and the definition of the genus being insufficient, what can we take as the type? It would be the species put first by Latreille in his next work in 1803 as above quoted, viz., *Acarus coleoptratus*, if that be a sufficiently described species. Dr. Oudemans says that it is, and that "Linné's description of his *Acarus coleoptratus* fits perfectly on *Oribates ovalis*, Koch." If that be so, then it appears to me that Dr. Oudemans has proved conclusively that the sense in which acarologists use the genus *Oribata* is correct, and that if it were changed into *Notaspis*, as Dr. Oudemans suggests, it would be wrong. I fear, however, that I cannot accept this simple method of deciding the point, because it seems to me that the Linnean description of *A. coleoptratus* is as impossible to identify as that of *A. geniculatus*; it is, "*Acarus ater, lateribus nigro-subcoleoptratus*." How Dr. Oudemans makes this fit *Oribata ovalis* or anything else is quite beyond my comprehension. The fact is that all that can be said is that both *Oribata*, Latreille, and *Notaspis*, Hermann, were intended to include the whole of the Oribatidæ, that the types utterly broke down, and that until Koch defined the former and Nicolet the latter, the genera were undefined, and therefore the names as at present used are correct.

Dr. Oudemans then suggests that the genus *Serrarius* may have to be changed into *Gustavia* because he is of opinion that *Gustavia sol*, Kramer, is likely to prove to be a nymph of a *Serrarius*; of this no evidence is offered. Kramer himself expressly said that it was not one of the Oribatidæ, and the four-jointed palpi seem to render it unlikely that it is. Even if it were, it seems to me that all existing authorities negative the validity of names of Acarina, whether generic or specific, which are founded on immature types; but as I have lately fully discussed this question in 'British Tyroglyphidæ,' Ray Society, 1901, pp. 185-187, I will not repeat it here.

Dr. Oudemans further says that the genus *Cepheus* ought to be renamed, and the name of *Kochia* (suggested by him) adopted instead, on the ground that *C. latus*, Koch, was the type species, and that it belonged to another genus, and that Nicolet created a new genus *Cepheus*, which fails because of Koch's priority. This does not appear to me to be a correct statement of the facts. Koch did not attempt to make any type; his *Cepheus latus* and *C. minutus* were published at the same time on loose sheets. Nicolet did not attempt to make a new genus *Cepheus*, he expressly says that his genus is *Cepheus*, Koch, but he divided it, creating a new genus *Tegeocranus*, to which he carried his own species *T. cepheiformis*, which he supposed, probably erroneously, to be the same as *Cepheus latus*, Koch; but the latter species is not sufficiently well defined by Koch for anyone to say for certain what it was, although there has been a desire by myself and others to retain Koch's name for something, and it is not improbable that the creature now called *Tegeocranus latus* may have been Koch's species; but this is uncertain. Koch did not give any available type; Nicolet defined Koch's genus better and divided it; his species are unmistakable. The same observations answer the allegation that Nicolet's genus *Tegeocranus* ought to be changed into *Cepheus*, as the reasons are the same, except that Dr. Oudemans adds an additional reason against the name of *Tegeocranus* being sustained, viz. that Nicolet's type was his *T. femoralis*, which is true, but that was so evidently a member of Koch's earlier genus *Carabodes* that it was necessary to carry it to that genus, leaving Nicolet's subtype *T. cepheiformis*, which he carefully gives, as the existing type of *Tegeocranus*.

Dr. Oudemans then says that *Notaspis* should be changed into *Eremaeus*, Koch, because *Notaspis* is founded on *Acarus coleoptratus* as a type; but, as I have pointed out above, this is not any type at all, and it is absolutely uncertain to what genus or family it belonged. *Notaspis* is a far older name than *Eremaeus*, and as portions were divided off, the old name was left for a part by modern writers, which seems to be a proper course.

Finally, Dr. Oudemans says that the well-known and universally accepted genus *Nothrus*, Koch (1835), must be changed into *Camisia*, because von Heyden in 1826 created a genus of the latter name with *Notaspis segnis*, Hermann, as type. There seems to me to be more to be said in favour of this than of any of Dr. Oudemans's other proposals, because *N. segnis* is usually included in the genus *Nothrus*; but some acarologists have been of opinion that it should be the type of a separate genus. If it be necessary to preserve

von Heyden's name, this would probably be the best way of doing it rather than to upset the well-established genus *Nothrus*; but it is doubtful whether it is necessary, because von Heyden's work was so extraordinary that it can hardly be looked upon as a scientific publication at all; some eminent modern acarologists have agreed not to pay any attention to new names contained in it unless they have been adopted by some later writer who has practically made them his own—so many of the genera being mere *nomina nuda*, or based upon types which were so, never having been described at all. Von Heyden probably intended to have described them in some later work, an intention which he did not carry out.

Dr. Oudemans at the end of his paper gives a list of what he calls the types of the genera; I fancy that the authors of the genera would, in many cases, have been somewhat astonished to be informed that these were their types. So far as I understand it, Dr. Oudemans considers that when a zoologist writes of an existing genus and gives any new species he creates a new genus which fails for want of priority, but of which his first-named species is the type; if this be his view, I am not able to agree with him.

LII.—*Descriptions of new Species of Ampelita and Tropidophora from Madagascar.* By HUGH FULTON.

Ampelita subnigra, sp. n.

Shell widely and deeply umbilicated, lenticular, solid; upper whorls light to very dark reddish brown below, polished, closely and irregularly obliquely striated above and below, underside of last whorl with indistinct, microscopic, spiral striæ; embryonic portion consisting of two whorls, the first almost smooth; whorls $4\frac{1}{2}$, moderately convex, regularly increasing, the last acutely carinate, and descending very slightly; aperture subovate, very oblique, leaden-bluish colour within; peristome narrowly expanded, polished, blackish brown, upper margin almost straight, with an angle where it joins the basal margin at the periphery, the basal and columellar margins regularly curved, margins connected by an extremely thin transparent callus.

Alt. 16, maj. diam. 40 millim.

Hab. Fort Dauphin, Madagascar.

The most nearly allied species known to me is *A. loucoubeensis*, Crosse, which is similar in colour and form, but has not the angular peristome of *A. subnigra*, which is also more