

Article VI.—SEVERTZOW'S CLASSIFICATION OF THE FELIDÆ

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Severtzow gave at the end of his article on the geographical distribution and geographical variation in the Carnivores, and especially in the Felidæ, a "classification géographique des Chats,"¹ in which he divided the family into five genera and twenty-seven subgenera. This classification was merely an outline, to be filled in later in another work which appears to have never been published.² He approached the subject from the geographical side,³ the distribution of the cats and their faunal relationships being the main points considered, the taxonomic and nomenclatural features being necessary adjuncts. That he selected his subgeneric groups intelligently is beyond question. Their availability is due to clear judgment of their relationships and to his designation in most cases of a single species as the representative of each subgenus, which thus became the type both by monotypy and (practically) by original designation. All of the twenty new subgenera except four contain only a single species each. Of his twenty-seven subgenera the names of seven (*Leo*, *Tigris*, *Panthera*, *Uncia*, *Puma*, *Lynchus*, *Felis*) date from previous authors. One (*Otocolobus*) is preoccupied. Two (*Oncooides* = *Leopardus* Gray s.s., *Urolynchus* = *Caracal* Gray) are antedated by other names for the same groups. Two (*Profelis*, *Chrysailurus*) are synonymous, having been based (according to Pocock) on the same species under different names. One other (*Catolynx*) appears to have been based on the domestic cat (Pocock) and is thus a synonym of *Felis* (s.s.). *Dendrailurus* was based on an unidentifiable species and is consequently invalid.

Of the twenty new subgeneric groups proposed by Severtzow fourteen have recently been accepted as valid genera, mostly within the present decade. Nine of his groups now recognized as full genera have

¹Notice sur la classification multisériale des Carnivores, spécialement des Félinés, et les études de zoologie générale que s'y rattachent. Par M. N. Severtzow (de Woronéïe, sur le Don, Russie. Rev. et Mag. de Zool., (2) IX, 1857, pp. 387-391, 433-439; X, 1858, pp. 3-8, 145-150, 192-199, 241-246, 385-393. The last section (pp. 385-393), containing "la classification des Chats" and a summary of his conclusions regarding "la classification multisériale de la distribution géographique des animaux," was published September 1858, from which all his new genera and subgenera take their date of publication. This noteworthy paper further indicates the author's appreciation of the zonal distribution of life in accordance with geographic conditions, as latitude and elevation, and has on this account, as well as nomenclaturally, considerable historic interest.

²"Je réserve pour ma monographie ou un prodrome spécial la caractéristique de ces genres et sous-genres" (*loc. cit.*, X, p. 390).

³Voici la classification géographique des Chats; les divisions principales sont nommées d'après "espèce supérieure" (*loc. cit.*, X, p. 395).

been renamed by later authors who either ignored or were ignorant of Severtzow's work, resulting in the addition of sixteen generic synonyms to the nomenclature of the Felidæ, and also indicating that in these instances subsequent authors recognized the groups in question which Severtzow was the first to segregate. Only one valid generic group (*Neofelis* Gray, 1867) has been added.

Severtzow's geographical and nonsystematic method of introducing his new subgenera renders it difficult to gather at a glance their real significance. The following schedule is intended to show more clearly their essential basis and status. His formal list (*loc. cit.*, p. 390) is purely nominal, consisting merely of the names of his genera and subgenera, which to be understood must be correlated with the text of pages 385 to 390.

Severtzow's new subgenera of cats were first brought to the general attention of systematists by Palmer in 1904 in his 'Index Generum Mammalium,' where all are duly entered, although previous notice had been taken of some of them; while Pocock, in his 'The Classification of existing Felidæ' (Ann. Mag. Nat. Hist., (8) XX, pp. 329-350, Nov. 1917), considers them all, adopting eleven of them as full genera (nine of them under Severtzow's names) and allocating the remainder in his synonymies.

In the following annotated list of Severtzow's genera and subgenera, those that appear also in Pocock's recent classification of the existing Felidæ¹ as valid genera are indicated by an asterisk (*) where both the name and the group are the same, and by a dagger (†) when the group is the same but the name different.

I. Genus **TIGRIS**. (Subgenera, 2.)

1. ***Leo** = *Leo* Oken, 1816. Type, by tautonymy, *Felis leo* Linné.
2. ***Tigris** = *Tigris* Oken, 1816. Type, by tautonymy, *Felis tigris* Linné.

¹The Classification of existing Felidæ. By R. I. Pocock. Ann. Mag. Nat. Hist., (8) XX, pp. 328-350, Nov. 1917. The names *Leo*, *Tigris*, *Uncia*, *Jaguaris*, are not included in this paper, but are treated in an earlier paper by Pocock (Ann. Mag. Nat. Hist., (8) XVIII, pp. 314-316, Sept. 1916) in which he makes the following statement: "Nevertheless, since the tendency of modern systematic mammalogy has found in the present instance expression in the admission of many species of leopard, lion, jaguar, and tiger, it is possible, perhaps probable, that the logical outcome of that process—namely the ascription of generic rank to each of these animals—will be followed in the future. If that be so, nominal symbols are available for them," which he proceeds to indicate. It is on this basis that these four names are listed below as having been accepted by Pocock.

II. Genus **PANTHERA**. (Subgenera, 4.)

3. ***Jaguarius**. Type, by monotypy, *Felis onca* Linné.
4. ***Panthera** = *Panthera* Oken, 1816. Includes several species, among them *Felis pardus* Linné, the type of the genus.
5. ***Uncia** = *Uncia* Gray, 1854. Type, by tautonymy. *Felis uncia* Schreber.
6. ***Puma** = *Puma* Jardine, 1843. Type, by tautonymy, *Felis concolor* Linné (= *Felis puma* Molina).

III. Genus **CYNAILURUS**. (No subgenera.)

7. †**Cynailurus** = *Cynailurus* Wagler, 1830. Antedated by *Acinonyx* Brookes, 1828. (See Hollister, Bull. 99, U. S. Nat. Mus., 1918, p. 150, footnote.)

IV. Genus **LYNCHUS**. (Subgenera, 2.)

8. †**Lynchus** = *Lynx* Kerr, 1792 = *Lynceus* Gray, 1821 = *Lynchus* Jardine, 1834. Type, by tautonymy, *Felis lynx* Linné.
9. **Urolynchus** = *Caracal* Gray, 1843. Type, *Felis caracal* Schreber.

V. Genus **FELIS**. (Subgenera, 18.)

10. †**Oncoides**. Type, by subsequent designation (Allen, 1905, Pocock, 1917), *Felis pardalis* Linné = *Leopardus* Gray, 1842, with type, by subsequent designation (Pocock, 1906), *Felis pardalis* Linné.

Oncoides was proposed for the small spotted cats of America, explicitly for (1) *Felis pardalis* Linné, (2) *Felis macroura* Wied (= *Felis wiedii* Schinz), (3) *Felis tigrina* Schreber. Gray in 1867 divided Severtzow's *Oncoides* into *Pardalis* and *Margay* (as sections or subgenera of *Felis*), thus rendering the type of *Pardalis*, by tautonymy, *Felis pardalis* Linné. The type of *Margay* is *Felis wiedii* Schinz, by subsequent designation (Allen, 1916, Pocock, 1917). At the same time Gray so restricted his genus *Leopardus* that it contained none of the original species, which were four in number, two of them from Central America and two from British India, he transferring it to the leopards of the Old World and the pumas and jaguars of America. By inadvertence I designated in 1905¹ *Felis leopardus* Schreber

¹Rep. Princeton University Exped. to Patagonia, III, part 1, 1905, p. 167, footnote.

as the type of *Leopardus*, taking the genus as reconstituted in 1843 and 1867, for the moment overlooking the 1842 date of its original publication. On a subsequent page (*loc. cit.*, p. 178) the correct citation is given but without designation of a type. I also designated in the same publication (*loc. cit.*, p. 179), *Felis pardalis* Linné as type of *Oncoides*. In reality the proper name for this group should have been *Pardalis*, as this name was established by tautonymy thirty-five years before a type was correctly designated for either *Leopardus* or *Oncoides*.

11. ***Pardofelis.** Type, by monotypy, *Felis marmorata* Martin.
12. **Catopuma.** Type, by monotypy, *Felis moormensis* Hodgson = *Felis temmincki* Vigors and Horsfield. Synonym of *Profelis*, apud Pocock.
13. ***Herpailurus.** Type, by monotypy, *Felis yaguarundi* Lacépède. *F. eyra*, also mentioned, is a color phase of *yaguarundi*.
14. ***Leptailurus.** Type, by monotypy, *Felis serval* Schreber.
15. **Crysailurus.** Type, by monotypy, *Felis neglecta* Gray = *Felis celidogaster* Temminck.
Chrysailurus is also synonymized by Pocock with *Profelis* Severtzow (type *F. celidogaster*) the latter having page precedence, but in the formal list *Chrysailurus* is No. 15 and *Profelis* No. 21.
16. †**Catolynx**, with 3 species. Type, by subsequent designation (Pocock, 1917), *Felis catus* Linné, the first species mentioned. Hence *Catolynx* = *Felis*, s.s.
17. †**Otocolobus.** Type, by monotypy, *Felis manul* Pallas
 Preoccupied by *Otocolobus* Brandt, 1844, for a genus of Spermophiles. *Manul* is suggested by Severtzow as a preferable name but he did not adopt it. *Otocolobus* was replaced in 1905 by *Trichailurus* Satunin, with the same type by original designation. Hence, *Otocolobus* = *Trichailurus*.
18. †**Lynchailurus.** Type, by monotypy, *Felis pajeros* Desmarest.
 In 1905 (*loc. cit.*, p. 183) I adopted *Lynchailurus* for the *F. pajeros* group and figured the skull and dentition of *L. pajeros crucina*. In 1917 Pocock (*loc. cit.*, p. 348) synonymized *Lynchailurus* with *Dendrailurus* Severtzow (type, by monotypy,

Felis colocolo Hamilton Smith = *Felis strigilata* Wagner, not *Felis colocolo* Molina). I adopted *Lynchailurus* twelve years before Pocock synonymized it with *Dendrailurus*, which fact might have given it preference, notwithstanding the latter has one line precedence over the former.¹ Besides this, the type and only species of *Dendrailurus* "*Felis strigilata*, Wagner (= Colomlo, F. Cuv.)" is unidentifiable, the *Felis strigilata* Wagner, ex *Felis colocolo* Ham. Smith (not of Molina), it having nothing whatever to do (except in the works of various compilers) with the *Felis colocolo* of Molina. It is merely a traditional and thus far an unidentified species. Consequently *Dendrailurus* is invalid.

19. **Oncifelis.** Type, by monotypy, *Felis geoffroyi* Gervais.

Synonymized by Pocock with *Herpailurus*, the type of which is the eyra-yaguarondi cats, a group cranially and externally very different from Gervais's *Felis geoffroyi*. I have on several different occasions in the last few years given generic recognition to *Oncifelis*. Respecting these two groups Pocock himself devotes a long paragraph to the consideration of their differences, beginning: "*H. yaguarondi* and *H. geoffroyi* are widely divergent species in cranial characters, the former departing the most, the latter the least, from the typical feline type. . . ." (*loc. cit.*, 1917, p. 347).

20. **Noctifelis.** Type, by monotypy, *Felis guigna* Molina.

Noctifelis is also synonymized by Pocock with *Herpailurus*. This is contrary to my view of the case, as for several years past, or as soon as a good series of the type species of *Noctifelis* came into my hands (eight specimens, skins and skulls) from near Tumeco, Chili, I have used the name *Noctifelis* on museum labels. This Chilean cat is one of the smallest of the American Felidæ, and in coloration and other external characters has little resemblance to any other. The skull is less than half the size of the skull of *Herpailurus*, and resembles it only in a general way.

21. ***Profelis.** Type, by monotypy, *Felis celidogaster* Temminck = *Felis aurata* Temminck.

¹Pocock says (*loc. cit.*, p. 333): "In the choice of names I have been guided strictly by priority, so far as it could be ascertained; and in the case of names proposed by Severtzow line-priority has been taken as the determining factor in the selection."

According to Pocock, as noted above (under No. 15), *Profelis* and *Chrysailurus* have the same type, and on the basis of page precedence he gives preference to *Profelis*, of which he regards *Chrysailurus* as a synonym.

22. ***Dendrailurus**. Type, by monotypy, *Felis strigilata* Wagner
As shown above (under No. 18), *Dendrailurus* is unavailable, the validity of the species on which it was based having never been established.
23. ***Felis**. Type, by monotypy, *Felis minuta* Temminck. Preoccupied by *Felis* Linné s.s.
24. ***Prionailurus**. Type, by monotypy, *Felis pardachrous* Hodgson = *Felis bengalensis* Kerr.
25. ***Zibethailurus**. Type, by monotypy, *Felis viverrina* Bennett.
26. ***Ictailurus**. Type, by monotypy, *Felis planiceps* Vigors and Horsfield. Antedated by *Ailurin* Gervais, 1855, with same type, if *Ailurin* can be accepted as a tenable name.
27. **Otailurus**. Type, by monotypy, "*Felis megalotis* Sol. Müll. . . . A Timor, un seul Chat, *F. megalotis*" (Severtzow, p. 388).
Pocock says (*loc. cit.*, p. 333), "type *megalotis*, Müll. (domestic cat from Timor)." Jentink, in 1891 (Notes from the Leyden Museum, XIII, pp. 219-220) published a special note on "*Felis megalotis* S. Müller," in which he says: "Again a very rare species, only known from the type-specimen in the Leyden Museum, described in the work entitled 'Verhandelingen over de Natuurlijke Geschiedenis der Nederlandsche Overzeesche Bezittingen, Zoologie, p. 54, 1839-44.' I am not aware that any traveller or naturalist has seen the species or has brought a specimen. The type is a not adult specimen from Timor. . . . The other day I received a collection of animals collected by Dr. H. ten Kate in Timor, and among other mammals he sent over a nearly full-grown male-specimen of *Felis megalotis* in spirits. . . Dr. ten Kate wrote to me that it seems to be a very rare animal. . . . I think that now a second specimen from the same island has been brought over, nobody will doubt whether *Felis megalotis* really is a *Felis*-species from Timor."

