

Article XX.—THE GENERIC NAMES *ECHIMYS* AND
LONCHERES.

By J. A. ALLEN.

The generic names *Echimys* and *Loncheres* have a rather involved history. The genus *Echimys* was first named by Étienne Geoffroy Saint-Hilaire, in a work written in "1808 qu 1809," but never published, as we learn from his son Isidore.¹ The name *Echimys* was first published in an abstract of a paper by F. Cuvier, on the dental characters of mammals, in 1809,² the entire reference to *Echimys* being as follows: "Dans l'ordre des rongeurs, pour ne parler que des genres, l'auteur établit les suivans, en réunissant les dents semblables, ou en séparant celles qui diffèrent; 1.° avec M. Geoffroy, celui des *Echimys* formé du lerot à queue dorée et du rat épineux de d' Azara."

In 1812, F. Cuvier, in the third part of his 'Essai sur de nouveaux Caractères pour les genres des Mammifères,' treated the genus *Echimys* at length,³ describing and figuring the dentition of the only two species mentioned by him as belonging to this genus, namely, 'le rat épineux'⁴ (pl. xv, fig. 14) and 'le rat à queue dorée'⁵ (pl. xv, fig. 15),—the same species originally referred by him to *Echimys*. His description and figures show clearly, however, that the two species are not congeneric, as genera are now recognized, and it becomes necessary to fix upon one of them as the type of *Echimys*.⁶

In 1825 F. Cuvier, in his 'Dents des Mammifères' (p. 185 and pl. lxxiii), again referred to the genus *Echimys* and figured the dentition of *E. dactylinus*. In his reference to the genus he

¹ Notice sur les Rongeurs épineux, désignés par les auteurs sous les noms d' *Echimys*, *Lonchere*, *Heteromys* et *Nelomys*, par M. Isidore Geoffroy Saint-Hilaire. Mag. de Zoologie, 2^e sér., 1840. Mammifères, pll. xx-xxix, pp. 1-57. Cf. pp. 1 and 2.

² Bull. Soc. philom., No. 24, Sept., 1809, p. 394.

³ Annales du Mus. d' Hist. Nat., XIX, 1812, pp. 283-285, pl. xv, figs. 14 and 15. This same plate, with these figures, is republished by G. Cuvier, in his 'Ossemens fossiles' (2d ed., V, pt. 1, 1823, pl. i), and his remarks respecting the osteological characters of "Les échimys" are doubtless based on the two species whose dentition is here figured. No particular species, however, is mentioned, beyond what is implied by the reference to the figures.

⁴ *Echimys spinosus* Desmarest (1817, ex E. Geoffroy, MS.).

⁵ *Echimys cristatus* Desmarest (1817, ex E. Geoffroy, MS.) = *Myoxus chrysurus* Zimmermann, 1780.

⁶ It appears from Desmarest (Nouv. Dict. d' Hist. Nat., nouvelle éd., X, 1817, pp. 54-50), and also from I. Geoffroy Saint-Hilaire (*l. c.*), that E. Geoffroy Saint-Hilaire, in his manuscript work (circa 1809), referred seven species of Spiny Rats to the genus *Echimys*. These were first published by Desmarest in 1817, under E. Geoffroy's manuscript names, Desmarest giving "Geof.," "Geoff.," "Geoffr.," or "Geoffroy" as the authority for the names in each

says: "C'est de l'échymys dactylin, jeune encore, de M. Geoffroy-Saint-Hilaire que j'ai tiré ce système de dentition" (p. 186). This species is also not congeneric with either of the two species referred by F. Cuvier to the genus *Echymys* in 1809 and 1812, and all three are now placed in separate genera. His 'echymys dactylin' became, in 1838, the type of *Dactylomys* I. Geoffroy, and in 1843, the type of Lund's genus *Echymys*; his 'rat épineux' is the type of *Loncheres* Illiger, 1811, and congeneric with the type of *Nelomys* Jourdan, 1838; and finally his 'rat à queue dorée' is congeneric with the type of *Mesomys* Wagner, 1845.

Two years after *Echymys* was introduced into the literature of zoölogy, namely, in 1811, Illiger proposed the genus *Loncheres*,⁸ on the basis of a formal but rather meaningless diagnosis, and the following: "Species: *Loncheres paleacea* (nova species e Brasilia) et *Hystrix chrysuroides* LinGmel." As the first species here mentioned remained a *nomen nudum* till described by Lichtenstein in 1820, it cannot be taken as the type, under the A. O. U. Canon XLII, which provides that the basis of a generic or subgeneric name must be either "(1) a designated recognizably described species, or (2) a designated recognizable plate or figure, or (3) a published diagnosis." As *Loncheres paleacea* complies with none of these conditions, his "*Hystrix chrysuroides* LinGmel." becomes the type of *Loncheres*. This is in reality the *Myoxus chrysurus* of Zimmermann,⁹ variously accredited by later writers to Boddaert, Schreber, Shaw, etc., which was based on 'Le Lérot à queue dorée' of Allemand in Buffon's Hist. Nat., "Suppl. IV, ed. d'Holl. p. 164, pl. 67," and is therefore a prior name for Desmarest's *Echymys cristatus*,¹⁰ Desmarest citing both the "Lérot à queue dorée, Buffon, Suppl., tom. 7, pl. 72," and "*Hystrix chrysuroides* Boddaert, Elench. mamm.," these references

case, except for *E. spinosus*, where it was doubtless accidentally omitted, as this species is also claimed for E. Geoffroy by his son Isidore. These species are as follows:—

1. "*Echymys huppé* (*Echymys cristatus*) Geof. Lérot à queue dorée Buff., . . . *Hystrix chrysuroides* Boddaert . . ." (p. 55).
2. "*Echymys dactylin*, *Echymys dactylinus*, Geoffroy" (p. 57).
3. "*Echymys épineux*, *Echymys spinosus*; Rat épineux de Azara . . . ; *Echymys roux* Cuvier . . ." (p. 57).
4. "*Echymys à aiguillons*, *Echymys hispidus*, Geoff." (p. 58).
5. "*Echymys didelphoïde*, *Echymys didelphoïdes*, Geoff." (p. 58).
6. "*Echymys de Cayenne* (*Echymys cayennensis*) Geoffr.; d'abord Rat de la Guyane, du même" (59).
7. "*Echymys soyeux* (*Echymys setosus*) Geoffroy" (p. 59).

⁸ Syst. Mamm. et Avium, 1811, 90.

⁹ Geograph. Geschichte, IV, 1780, 352.

¹⁰ Nouv. Dict. d'Hist. Nat., nouvelle ed., X, 1817, 55.

being also based on Allemand. It is thus evident that the specific name *chrysurus* of Zimmermann has many years' priority over *cristatus* of Desmarest, both having been founded on Allemand's L'érot à queue dorée. (For the pros and cons of this case, see Isidore Geoffroy Saint-Hilaire, *l. c.*, pp. 6 and 7.) It is further evident that the type of *Loncheres* is the *Echimys cristatus* of recent authors, although Lichtenstein in 1820¹ attempted to restrict the genus *Loncheres* to *L. paleacea*, then for the first time described, he also referring all of the previously described species of *Echimys*, which he saw fit to recognize, to *Loncheres*. His species are (1) *L. paleacea* "Ill.," (2) *L. chrysurus*, (3) *L. rufa* (= *E. spinosus* Desm.), (4) *L. myosurus*, sp. nov. (= *E. cayennensis* Desm.). Later Lichtenstein strangely referred² all of these species except *L. paleacea*, to *Mus*, which he retained as the type and only species of *Loncheres*. In 1829 Fischer adopted³ *Loncheres* for the eight species described by Desmarest and the *L. paleacea* of Lichtenstein, ignoring *Echimys* altogether. On the other hand Rengger in 1830⁴ adopted *Echimys*, citing *Loncheres* as a synonym of it. The two species he had occasion to mention are the *E. spinosus* Desm. and *E. longicaudatus*, sp. nov.

In 1837, in an extract from an unpublished paper by Jourdan, F. Cuvier⁵ added the genus *Nelomys* Jourdan, with *N. blainvillii*, sp. nov.,⁶ as type. According to F. Cuvier, Jourdan joined with this, under *Nelomys*, "l'Echimys huppé" (= *E. cristatus* of authors), which led Cuvier to remark: "Cette réunion suffirait pour indiquer les rapports des Nélomys avec les Echimyds, l'Echimys huppé étant le type de dernier genre, si, en effet, les Echimyds formaient un genre naturel." Cuvier comments on the fact that the group of *Echimys*, consisting of nine or ten species, includes forms that differ much from each other in the structure of the teeth. He also states, as shown above, that he considers l'Echimys huppé (= *E. cristatus* Desm.) as the type of

¹ Ueber die Ratten mit platten Stacheln. Von Herrn Lichtenstein. (Vorgelesen den 15 Januar 1818.) Abhandl. der Königl. Akad. der Wissen. in Berlin, aus den Jahren 1818-1819, pp. 187-196. The volume is dated 1820.

² Darstellung neuer oder wenig bekannter Säugethiere, 1827-1834, pl. xxxv, fig. 1, and pl. xxxvi, with the text belonging thereto.

³ Syn. Mamm., 1829, pp. 306, 307, 588.

⁴ Naturg. der Säugethiere von Paraguay, 1830, pp. 233-237.

⁵ Rapport sur un mémoire de M. Jourdan, de Lyon, concernant quelques Mammifères nouveaux. Par M. F. Cuvier, Ann. des Sci. Nat., sér. 2, VIII, 1837. Cf. pp. 370, 371.

⁶ Described in a footnote to page 371, the description being an inedited extract, in marks of quotation, from Jourdan's paper.

the genus *Echimys*, and, further, that *Echimys dactylin* is an aberrant species.

This was the state of the subject when I. Geoffroy Saint-Hilaire, the following year, took up the revision of the American Spiny Rats. His conclusions were first published in abstract in 1838,¹ and in full in 1840.² This author, aided by the types of nearly all the species named by his father, E. Geoffroy,³ and first published by Desmarest in 1817, and thirteen skulls, representing in all ten species, was able to throw great light upon this difficult and as yet very imperfectly studied group. His memoir, as published in full in 1840 (*l. c.*), opens with an admirable historical résumé of the subject, followed by detailed analytical and comparative descriptions of both the external characters and the dentition, rendering, with the accompanying plates (eight illustrating the external features and two the dentition), his memoir of the highest importance as a trustworthy starting point for subsequent investigators. In matters of nomenclature, however, he naturally followed the customs of the day, disregarding the rule of priority, and adopting methods of selecting types for his genera unfortunately contrary to those required by modern rules of nomenclature. Thus, for example, he considered that the species named *chrysurus* (as he supposed by Boddaert, and later adopted by various writers, as Shaw, Lichtenstein, and Fischer) should be eliminated "du système zoologique comme purement nominale," because it "ne diffère pas de *Echimys cristatus*," described twenty-five years later. While it is true that the *Lérot à queue dorée* of Buffon was based on an immature specimen preserved in spirits, received through Dr. Klockner from Surinam, and that *Echimys cristatus* was based on an adult example from Guiana, neither I. Geoffroy (*cf. l. c.*, pp. 6, 7, and 49), nor any author who has considered the question, has ever doubted that the two specimens are referable to one and the same species.

In this paper I. Geoffroy added two new species, and divided

¹ Notice sur les Rongeurs épineux désignés par les auteurs sous les noms d'*Echimys*, *Loncheres*, *Heteromys* et *Nelomys*, par M. Isidore Geoffroy Saint-Hilaire. (Présentée à l'Académie des Sciences le 25 juin 1838.) (Extrait.) *Ann. des Sci. Nat.*, sér. 2, X, 1838, pp. 122-127.

² *Mag. de Zool.*, sér. 2, 1840, Mammifères, pl. xx-xxix, pp. 1-57.

³ "Presque tous les originaux des déterminations de mon père existent encore du muséum"; and, he adds, "c'est d'après eux surtout que j'essaierai plus bas la révision de toutes ces espèces, en m'aidant de l'examen de leurs crânes et de leurs dents, et de leur comparaison avec les individus rapportés depuis au muséum par d'autres voyageurs ou décrits par divers naturalistes."—*Mag. de Zool.*, 1840 (*l. c.*, p. 2).

the old genus *Echimys* of F. Cuvier and subsequent French authors into three, namely, *Echimys*, *Nelomys*, and *Dactylomys*, the latter being new. These innovations all date from 1838, being covered by the abstract, although the paper in full was not published till 1840. The three genera are founded mainly on differences in the conformation of the teeth, and on the form and relative size of the feet; the size and shape of the ear, and the condition of the tail as to whether naked or clothed, being considered as not characters of generic importance. His genera (1838) are (1) *Echimys*, with six species, including one new, and one doubtful; (2) *Nelomys*, with also six species, including one new; (3) *Dactylomys*, with one species. These three genera and thirteen species, in the order of the memoir proper (1840) are as follows¹:

I. DACTYLOMYS.

- 1.
- D. typus*
- =
- E. dactylinus*
- Desm.

II. NELOMYS.

2. *N. cristatus* (Desm.).
3. *N. paleaceus* (Licht.).
4. *N. blainvillii* Jourdan.
5. *N. semivillosus*, sp. nov.
6. *N. didelphoides* (Desm.).
7. *N. armatus* I. Geoff. = *Mus. hispidus* Licht., not *E. hispidus* Desm.

III. ECHIMYS.

8. *E. setosus* Desm.
9. *E. cayennensis* Desm.
10. *E. myosurus* (Licht.) = *Loncheres longicaudatus* Rengg.
11. *E. albispinus*, sp. nov.
12. *E. spinosus* Desm.
13. *E. hispidus* Desm.

Of the generic distinctness of *Dactylomys* there is of course no question, and it can be set aside without further consideration as being in no way involved with *Echimys*, *Loncheres*, or *Nelomys*. Respecting *Nelomys*, he says: "J'ai trouvé que l'*Echimys cristatus* et le *Nelomys blainvillii* sont bien, comme l'a avancé M. Jourdan et comme l'a admis M. Frédéric Cuvier, deux espèces parfaitement congénères." Consequently *Nelomys* (type *N. blainvillii*) Jourdan is a pure synonym of *Loncheres*, which, on the principle of elimination, has *E. cristatus* as its type.

Respecting *Echimys*, I. Geoffroy says: "Ce genre, appelé *Loncheres* par Illiger, comprenait, avec les espèces qui s'y trouvent conservées, celles qui sont présentement séparées sous les

¹ The authority for *Echimys*, and for all the species here assigned to Desmarest, is given as "Geoff. St.-Hilaire" (= E. Geoff. St.-Hilaire), from their having been first named by his father, although admittedly not published by him, but by Desmarest.

noms générique de *Dactylomys* et de *Nélomys* (*l. c.*, p. 51). He here restricts the name *Echimys* "aux espèces analogues par leur organization à l' *Echimys setosus*" (*l. c.*, p. 30). As, however, the type of *Echimys* should be one of the two species originally referred to it, the type is properly *E. spinosus* Desm., unfortunately a species not strictly congeneric with *E. setosus* Desm., now referred to the genus *Mesomys* Wagner (1845).

Mesomys was originally based¹ on a tailless specimen from Borba, Brazil, which was also the basis of the type species, *Mesomys ecaudatus* (sp. nov. ex Natterer MS.). The genus is here characterized as follows: "Habitus Loncherium, dentes Echinomyum, spinæ validæ, cauda nulla"; and he adds: "Die einzige mir bekannte Art ist *Mesomys ecaudatus* Natt." Quoting later from Natterer's manuscript notes, he says the specimen was a pregnant female, and though the young were still very small, they had short tails.² This shows that the tailless condition of the type of *Mesomys*, was only the frequent abnormality common to the various species of South American Spiny Rats.³ Winge and Trouessart associate with this species *E. spinosus* Desm., as well as certain other species, but I find no satisfactory account of the dentition of *M. ecaudatus*. In any case, the type of *Echimys* is *E. spinosus* Desm. Therefore the large group of species now currently referred to *Echimys*, namely the *E. cayennensis* group, is still in need of a name, since *Dactylomys* I. Geoffroy (1838), *Isothrix* Wagner (1845), *Lasiuromys* Deville (1852), *Thrinacodus* Günther (1879), *Thricomys* Trouessart (1880), and *Kannabateomys* Jentink (1891), are all so different from the present group as not to require consideration in this connection. *Nelomys* Jourdan (1837) and *Phyllomys* Lund (1841) are both, apparently, synonyms of *Loncheres*.

The foregoing may be summarized as follows:—

1. The name *Echimys* was given to a genus of mammals by Étienne Geoffroy Saint-Hilaire in 1808 or 1809, in a work still unpublished.

2. *Echimys* as the name for a genus of mammals was first published by F. Cuvier in 1809, from a manuscript work by E.

¹ Arch. f. Naturg., 1845, i, 145.

² Abhandl. der II Cl. d. k. Akad. d. Wiss. München, V, Abthl. 2, 1848, 295.

³ On this condition in *Echimys trinitatis* see Allen and Chapman, Bull. Am. Mus. Nat. Hist., V, 1893, 226.

Geoffroy Saint-Hilaire, and was exclusively based on (1) "le Lérot à queue dorée" of Allemand (in Buffon), named *Myoxus chrysurus* by Zimmermann in 1780, and *Echimys cristatus* by Desmarest (ex E. Geoffroy, MSS.) in 1817; and (2) le "Rat épineux" of Azara, named *Echimys spinosus* by Desmarest in 1817 (ex E. Geoffroy MS.).

3. In 1812 F. Cuvier further characterized the genus *Echimys*, from the same two species above named.

4. Therefore one of these two species, as they are not congeneric, must be taken as the type of *Echimys*.

5. Illiger, in 1811, established the genus *Loncheres*, referring to it two species, namely, (1) *L. paleacea*, a species not described till nine years later, and (2) "*Hystrix chrysuroides* LinGmel.," = *Myoxus chrysurus* Zimm.

6. As an undescribed species cannot be taken as the type of a genus, *Myoxus chrysurus* Zimm. (= *Echimys cristatus* Zimm.) becomes the type of *Loncheres*.

7. This, by the process of elimination, leaves *Echimys spinosus* Desm. as the type of *Echimys*.

8. *Nelomys* Jourdan (1837), based on a species (*Nelomys blainvillii* Jourd.) currently recognized as congeneric with *Echimys cristatus* Desm. (= *Myoxus chrysurus* Zimm.), is therefore a pure synonym of *Loncheres*.

9. *Mesomys* Wagner (1845) was based on a species (*Mesomys ecaudatus* Wagner) currently treated as congeneric with *E. spinosus* Desm., and is therefore in all probability a pure synonym of *Echimys*. If otherwise (I am unable to find a satisfactory account of the dentition of *Mesomys*), *Mesomys* will not conflict with *Echimys*.

10. In 1817 Desmarest described the following seven species under *Echimys*, adopting therefor E. Geoffroy Saint-Hilaire's manuscript names. These species are:

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| 1. <i>Echimys cristatus</i> . | 5. <i>Echimys didelphoides</i> . |
| 2. <i>Echimys dactylinus</i> . | 6. <i>Echimys cayennensis</i> . |
| 3. <i>Echimys spinosus</i> . | 7. <i>Echimys setosus</i> . |
| 4. <i>Echimys hispidus</i> . | |

11. The subsequent history of these species, in relation to the genus *Echimys*, is as follows:

a. In 1811 *Echimys cristatus* became the type of *Loncheres* Illiger.

b. In 1838 *Echimys dactylinus* became the type of *Dactylomys* I. Geoffroy Saint-Hilaire.

c. *Echimys spinosus* was referred by Burmeister in 1854¹ to the genus *Mesomys* Wagner, who assumed (with Reinhardt, but doubtless incorrectly) that *Mesomys ecaudatus*, the type of *Mesomys*, was based on simply a tailless specimen of *E. spinosus*.

d. *Echimys cristatus* and *E. didelphoides* are still currently referred to *Loncheres*.

e. The remaining three species, *Echimys hispidus*, *E. cayennensis*, and *E. setosus*, are still referred to the genus *Echimys*, as the genus is now currently accepted.

12. The genus *Echimys*, as now currently accepted, is not the true *Echimys* of F. Cuvier, but *Echimys* as emended by I. Geoffroy Saint-Hilaire in 1838 and 1840, by improperly taking *E. setosus*, instead of *E. spinosus*, as the type.

13. For the group of species now commonly referred to *Echimys* no name hitherto proposed is available.

In view of the foregoing it seems necessary to provide a name for the group containing *Echimys cayennensis*, *E. hispidus*, and *E. setosus* of Desmarest (1817, ex I. Geoffroy Saint-Hilaire), and the allied species since described, for which I here propose

Proëchimys, gen. nov.

Echimys I. GEOFFROY SAINT-HILAIRE, Ann. des Sci. Nat. sér. 2, X, 1838, 125; Mag. de Zool., sér. 2, 1840, 30. Not *Echimys* of F. Cuvier, 1809, ex I. Geoffroy Saint-Hilaire, MS.

Type, *Echimys trinitatis* Allen and Chapman.

The following, besides other species, seem probably referable to *Proëchimys*:

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| 1. <i>Proëchimys cayennensis</i> (<i>Desm.</i>). | 9. <i>Proëchimys chrysæolus</i> (<i>Thomas</i>). |
| 2. " <i>hispidus</i> (<i>Desm.</i>). | 10. " <i>decumanus</i> (<i>Thomas</i>). |
| 3. " <i>setosus</i> (<i>Desm.</i>). | 11. " <i>gymnurus</i> (<i>Thomas</i>). |
| 4. " <i>albispinus</i> (<i>I. Geoff.</i>). | 12. " <i>trinitatis</i> (<i>A. & C.</i>). |
| 5. " <i>dimidiatus</i> (<i>Günther</i>). | 13. " <i>canicollis</i> (<i>Allen</i>). |
| 6. " <i>ferrugineus</i> (<i>Günther</i>). | 14. " <i>urichi</i> (<i>Allen</i>). |
| 7. " <i>semispinosus</i> (<i>Tomes</i>). | 15. " <i>mincæ</i> (<i>Allen</i>). |
| 8. " <i>centralis</i> (<i>Thomas</i>). | 16. " <i>cherriei</i> (<i>Thomas</i>). |

¹ *Thiere Brasiliens*, I, 1854, 205.