Case 2361

Strongylopus Tschudi, 1838 (Amphibia, Anura): proposed designation of Rana fasciata Smith, 1849 as the type species

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Abstract. The purpose of this application is to designate Rana fasciata Smith, 1849 as the type species of the nominal genus Strongylopus Tschudi, 1838 in accordance with current universal understanding and usage. The genus was based on another taxonomic species of which the name, Rana fasciata Burchell, 1824, has been suppressed (Opinion 713, November 1964). This latter name has been generally considered to be a synonym of Strongylopus grayii (Smith, 1849). Species of frog included in the genus Strongylopus (family ranidae) are found in uplands in South Africa northward to Tanzania.

Keywords. Nomenclature; taxonomy; Amphibia; Anura; ranidae; frogs; Strongylopus; Strongylopus fasciatus; Strongylopus grayii; Southern Africa; East Africa.

1. For a long time the generic name Strongylopus Tschudi, 1838 was submerged as a subjective synonym of Rana Linnaeus, 1758. It was resurrected by Van Dijk (1966, p. 252) and since then has been used by a number of authors as a valid generic name (see Van Dijk, 1971, 1972; Channing & Van Dijk, 1976, p. 25, fig. 16; Channing, 1979, 1981, 1986; Frost, 1985, pp. 522–523; Poynton & Broadley, 1985; Duellman & Trueb, 1986, p. 546) or subgeneric name (see Clarke, 1981, pp. 325, 326; Dubois, 1981a, p. 929; 1981b, pp. 233, 235; 1987a). A few authors (Passmore & Carruthers, 1979, p. 128; Wager, 1986, pp. 43, 70–72) have continued to regard it as a synonym of Rana, but it is likely that the name will remain in use. At present six taxonomic species are recognised (see Channing, 1981).

2. The name Strongylopus was proposed by Tschudi (1838, pp. 38, 78–79) for a single nominal species, Rana fasciata 'Boie'. In his use of the name, Boie (1832, p. 186) referred to Rana fasciata Burchell (1824, p. 32), the earliest use of the specific name. Burchell described the taxon as having a small, short body and as 'a very pretty and new species of frog of a green color, and marked by a longitudinal yellow stripe on its back, and by transverse stripes of brown on its hind legs'. Boie used the name fasciata for specimens in the Naturhistorisch Museum in Leiden which were among those subsequently studied by Tschudi. No specimens or illustrations of fasciata attributable to Burchell are known to exist.

3. Duméril & Bibron (1841, p. 389) included Strongylopus Tschudi as a synonym of Rana Linnaeus. They included a nominal species fasciatus 'Boie' and described four varieties, based on material in the Muséum d'Histoire Naturelle in Paris. In describing variety 'D' (p. 391) they noted: 'Nous lui conservons le nom par lequel feu Boie avait désigné dans le musée de Leyde des sujets appartenant sans doute à notre
quatrième variété, nom sous lequel l’espèce été citée par M. Tschudi comme type d’un genre particulier, qu’il a appelé Strongylopus’. In the Atlas to their work (1854, pl. 86, fig. 3; not fig. 2 as given by Parker & Ride, BZN 19: 291, September 1962), Duménil & Bibron figured the open mouth of ‘Strongylope à bandes’. It was later shown (see Parker & Ride, BZN 19: 291) that Duménil & Bibron’s material included two taxonomic species.

4. Andrew Smith (1849; see Waterhouse, 1880, p. 490 for the date of publication) included several species in Rana, among them fasciata ‘Boie’ (pl. 78, text, figs. 1, la–lc) and a new nominal species, grayii (pl. 78, text, figs. 2, 2a–2c). The incorrect spelling grayi has been used for the latter species by nearly all subsequent authors, as noted by Comrie Greig, Boycott & Villiers (1979, p. 25). In describing fasciata, Smith noted that this was the species placed in Strongylopus by Tschudi. His fig. 1 accords with the colour pattern of Duménil & Bibron’s variety ‘D’, and his fig. 2b of the open mouth of Rana grayii accords with that figured by Duménil & Bibron as ‘Strongylope a bandes’. In describing grayii, Smith noted: ‘It has, I believe, been considered by Duménil & Bibron as a variety of Rana fasciata, but I cannot regard it as such’. Smith’s species, fasciata and grayii, were the same two species represented by variety ‘D’ and ‘Strongylope à bandes’ respectively in Duménil & Bibron’s material in Paris. Smith described R. fasciata as having the ‘upper surface of the head and back anteriorly light rusty wood-brown ... six longitudinal stripes on the back and sides ... a stripe along the anterior part of leg close to the body, and two others, or a few spots only, on the parts towards the toes ... body long, rather slender, and very narrow immediately in front of the hinder extremities’. He described R. grayii as having ‘two or more narrow transverse bars on anterior of fore legs, three on the outer side of the thighs, three towards the posterior side of the leg, and two or more on the outer side of the tarsus ... body short and moderately robust’. Since 1849 all authors have consistently used the names fasciata and grayii as Smith defined them.

5. Günther (1859, p. 20), adopting Rana as the generic name, recorded the name fasciata used by Boie (1832), Tschudi (1838), Duménil & Bibron (1841) and Smith (1849) as representing the same species. Fitzinger (1860, p. 414) and Steindachner ([1867], pp. 21–22) both adopted the name Strongylopus; Fitzinger recorded the use of fasciata by Boie, Tschudi and Duménil & Bibron as synonymous, while Steindachner noted the use of the name by Tschudi, Duménil & Bibron and Smith as referring to the same taxon. Parker & Ride (BZN 19: 291), however, pointed out that the specimens in Leiden seen by Tschudi included the same two species as are represented in Duménil & Bibron’s Paris material and that those specimens collected by Boie and recorded by him as fasciata Burchell belonged to the taxon later called grayii by Smith. Recognition that Smith’s name grayii related to the species called fasciata by Burchell (1824) meant that fasciata was the valid name for that taxon, and that the species universally called fasciata would require a new name. An application by Parker & Ride (BZN 19: 290–292, September 1962) sought to avoid a transfer of names, which would have resulted in confusion, and to maintain nomenclatural stability by designating one of Smith’s specimens of fasciata as the neotype of Rana fasciata Burchell, 1824. Prof Hobart M. Smith and Prof J.C. Poynton (BZN 20: 254, 255; July 1963) supported the conservation of the name Rana fasciata in its currently accepted usage, but the former was opposed to crediting authorship to Burchell, who had not used the name in this sense. In Opinion 713 (November 1964) all uses of
fasciata (as published in combination with Rana) prior to that by Smith (1849) were suppressed for both priority and homonymy, and a lectotype (catalogue no. BM(NH) 58.11.25.127 in the Natural History Museum, London) for Smith's nominal taxon R. fasciata was designated. This specimen had been proposed by Parker & Ride as a neotype for Rana fasciata Burchell, 1824 but this latter course did not receive the necessary approval by the Commission (the implication in Opinion 713 that a neotype designation for fasciata Burchell had been confirmed is an error).

6. Opinion 713 has the result that fasciata is not the valid name for the taxonomic species on which Strongylopus was based. At the time of Parker & Ride's application Strongylopus was considered to be a synonym of Rana and this was therefore of little consequence (para. 13 on BZN 19: 292 and para. 1 above). The valid name for the type species of Strongylopus has been taken to be Rana grayii Smith, a subjective synonym of the suppressed fasciata Burchell. However, it might be confusing for future workers to have a nominal species S. fasciatus (Smith) included in the genus and yet have grayii as the valid name of the type species Rana fasciata Burchell, 1824 (even though this course would not require Commission action). Moreover, Comrie Greig, Boycott & Villiers (1979, p. 28) suggested that fasciata Burchell is a synonym of Rana fuscigula Duméril & Bibron, 1841 (p. 386) and not of grayii Smith. Fitzinger (1843, p. 31), Van Dijk (1966, p. 252), Comrie Greig et al. (1979, p. 24) and Frost (1985, p. 522) cited 'Rana fasciata' as the type and it is desirable to maintain continuity by following previous authors. Rana grayii and R. fasciata, both of Smith (1849), are closely related species and any genus-group taxon containing one of them is bound to contain the other. The specific name of R. grayii was placed on the Official List in Opinion 713 and is defined by the lectotype designated by Parker & Ride (1962; BZN 19: 292), a female specimen (catalogue no. BM(NH) 58.11.25.138 in the Natural History Museum, London) collected by Smith from the 'Cape'.

7. In a previous publication (Dubois, 1987b) I mentioned (p. 72) three options: (A) taking the name fasciata from Duméril & Bibron (1841); (B) designating R. grayii Smith, 1849 as the type species of Strongylopus; and (C) designating R. fasciata Smith, 1849 as the type species. The third course, which I now propose, does not involve any modification to Opinion 713. It maintains a nominal species R. fasciata as the type species and, at the same time, provides continuity in the usage of the name Strongylopus fasciatus for a particular taxonomic species.

8. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus Strongylopus Tschudi, 1838 and to designate Rana fasciata Smith, 1849 as the type species;
(2) to place on the Official List of Generic Names in Zoology the name Strongylopus Tschudi, 1838 (gender: masculine), type species by designation in (1) above Rana fasciata Smith, 1849;
(3) to add to the entry on the Official List of Specific Names in Zoology for the name fasciata Smith, 1849, as published in the binomen Rana fasciata and as defined by the lectotype designated in Opinion 713 (November 1964), an endorsement that it is the specific name of the type species of Strongylopus Tschudi, 1838.
References


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