Taxonomic notes on some Japanese amphibians

I. Problems concerning Rana macropus Bouleneger, 1886*

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日本の両生類の分類学的ノート
I. Rana macropus BOULENGER, 1886 に関する問題

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G. BOULENGER は、Ixalus japonicus HALLOWELL, 1860 (=ニホンカジカガエル Buergeria japonica; アオガエル科) をアガエル科 Rana 属へ移籍したが、Rana japonica の学名がニホンアガエルによって先取されていたため、代替名として Rana macropus を提示した。その後、本種がアオガエル科へ復帰することによって、この学名は Ixalus japonicus の劣級客観同物異名となった。ところが Y. OKADA の一連の論文では、Rana macropus の学名が本種とは別の赤蛙 (=リュウキュウアガエル Rana okinavana; アガエル科) に当てられているので、その誤りを指摘した。

The late Dr. OKADA’s taxonomic treatment of some Japanese amphibians seems to have caused unnecessary but critical confusions among subsequent authors, particularly among those inhabiting outside of Japan. This is partly because his monograph, Fauna Japonica: Anura, published in 1966, includes many erroneous statements, although it is the “latest” source of information for the Japanese anurans written in English and is frequently cited by foreign students. In this short paper, we discuss a problem concerning the confusion of a rhacophorid frog and a ranid brown frog from the Ryukyu Archipelago.

OKADA (1966:62) applied the name Rana macropus to the brown frog from the Ryukyu Archipelago, but the use of this name is not justified taxonomically.

HALLOWELL (1860:501) described a rhacophorid, Ixalus japonicus, from Japan (further details of the type locality not described, but Ousima (=Amami Oshima, Amami group), according to STEJNEGER (1907:157)). BOULENGER (1886:414) examined a ‘half-grown’ specimen of a frog from ‘Oho Shima’ (=Amami Oshima) and identified it same as HALLOWELL’s Ixalus

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japonicus. He, however, considered that this species belonged to the genus *Rana*, Ranidae, and not to Rhacophoridae as Hallowell described. The specific name, *japonicus*, however, had been preoccupied by the brown frog of the genus *Rana* from Japanese mainland and China (i.e., *Rana japonica*) described by Günther (1858). Simply moving this species from *Ixalus* to *Rana* would only make a homonym. Therefore, Bouleneger (1886:414) proposed a new name *Rana macropus* for Hallowell’s *Ixalus japonicus*. Stejneger (1907:155–157) placed Bouleneger’s *Rana macropus* in the synonymy of Hallowell’s *Ixalus japonicus* and clearly stated that this species did not belong to *Rana*. He (Stejneger, 1907:155) stressed the presence of minute vomerine teeth in this rhacophorid and transferred it from *Ixalus* to *Polypedates*.

Okada adopted the name *Polypedates japonicus* in his monographs (1930:192–194, 1931:207–209). From this action he seems to have agreed Stejneger’s (1907) view, although he mentioned nothing about the taxonomic problem of this species. On the other hand, he did not abandon the name *Rana macropus* and applied this name to a true ranid brown frog from Amami and Okinawa groups (Okada, 1930:86–89, 1931.95–97). He noted that Bouleneger’s action of synonymizing *Rana macropus* with *Ixalus japonicus* was problematical. From this statement it is evident that Okada (1930, 1931) completely mistook the meaning of taxonomic treatments by Bouleneger (1886) and Stejneger (1907). A little later, he visited the British Museum and actually examined the type ‘specimens’ (evidently incorrect since Bouleneger (1886) provided description for only one specimen) of Bouleneger’s *Rana macropus*. He (Okada, 1934:20, footnote 6) clearly stated that Bouleneger’s *Rana macropus* was quite similar to *Polypedates japonicus*. He therefore changed his idea and stated that *Rana macropus* in his previous papers should be identified with *Rana sauteri*. The latter species is a brown frog currently known from Taiwan and Indochina (Bourret, 1942:321). Inger (1947), while listing *Rana macropus* (sensu Bouleneger) in the synonymy of *Rhacophorus japonicus* (p. 346), synonymized *Rana macropus* (sensu Okada) with *Rana okinavana* (p. 332), which had been described by Boettger (1895) from Okinawajima, Okinawa group. Koba (1957:198) once cited Okada’s (1934) view and adopted the name *Rana sauteri* for a brown frog from Okinawa group, but he used *Rana okinavana* as a replacement name of *Rana macropus* in the subsequent paper on the fauna of Amami group (Koba, 1962:97). Okada (1966:178–182), as in 1930’s, adopted the neme *Polypedates japonicus* for the rhacophorid in question. On the other hand, he (Okada, 1966:65) seems to have completely forgotten his previous remarks (Okada, 1934:20) and mentioned that Inger’s (‘1946’ (this citation also incorrect)) treatment of synonymizing *Rana macropus* with *Rhacophorus japonicus* was unjustified. Instead, he still maintained that *Rana macropus* was a distinct species of the genus *Rana* occurring in Amami and Okinawa groups. Even astonishingly, Okada listed *Rana sauteri* in the same monograph (1966:130–131) and gave the following statements: “the record of Tokunoshima (=Amami group) is the first, by Dr. K. Koba in 1956... we have not seen any specimens of this species from
the type locality and therefore can not express any opinion as to its validity”. From such statement we suspect that even OKADA’s previous opinion (OKADA, 1934:20) is doubtful since he seems to have been unfamiliar with Rana sauteri. It is unlikely that there are more than two species of brown frogs of the genus Rana in the Ryukyu Archipelago. In any case, the specific name macropus cannot apply to it, as discussed above. BORKIN (1979) examined the x-rayed digits of the holotype of Rana macropus and concluded that the species belongs to family Rhacophoridae. He briefly noted that the name Rana okinavana should be applied to the brown frog from the Ryukyu Archipelago.

The generic position of the quite distinct rhacophorid, Ixalus japonicus HALLOWELL, was changed to Polypedates (STEJNEGER, 1907) and once again moved to Rhacophorus by INGER (1947). The choice of generic name, Polypedates or Rhacophorus, was often debated and not strictly determined in those periods (see discussion by NAKAMURA and UÉNO, 1963:56). More recently, after the publication of LIEM’s (1970) work, this species has been placed in the genus Buergeria. Thus, there are two distinct species of frogs in the Ryukyu Archipelago; one is a member of brown frogs of the genus Rana (currently recognized as Rana okinavana BOETTGER, 1895 by Japanese herpetologists, e. g., NAKAMURA and UÉNO, 1963; KURAMOTO, 1974), and the other is a member of Rhacophoridae currently called Buergeria japonica (HALLOWELL, 1860). OKADA’s (1966) Rana macropus is only a synonym of the former species.

**Literature Cited**


