



12-31-1971

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Recommended Citation

Fawcett, James D. and Smith, Hobart M. (1971) "Nomenclatural problems concerning the generic and familial names for the New Zealand and American ribbed frogs," *Great Basin Naturalist*: Vol. 31 : No. 4 , Article 8.

Available at: <https://scholarsarchive.byu.edu/gbn/vol31/iss4/8>

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NOMENCLATURAL PROBLEMS CONCERNING THE
GENERIC AND FAMILIAL NAMES
FOR THE NEW ZEALAND AND
AMERICAN RIBBED FROGS

James D. Fawcett¹ and Hobart M. Smith¹

Although information concerning many aspects of the life history and physiology of New Zealand's native frogs remains sparse or lacking, evolutionary and anatomical interest in the group has markedly increased during the last 50 years. It is therefore rather surprising to note the current uncertainty among herpetologists, zoogeographers, and anatomists concerning the spelling of the generic name and the correct application of a family-group name to these animals.

The relevant historical facts concerning the spelling of the generic name are as follows: Fitzinger (1861:218) described two specimens which had been collected by the Austrian naturalist Dr. v. Hochstetter on Coromandel Peninsula and named them *Leiopelma hochstetteri*. Seven years later, Günther (1868:478) of the British Museum altered the generic spelling to *Liopelma*, and the New Zealand frogs were, with but three exceptions (Steindachner, 1867:33; Aitken, 1870:87; Sievers, 1895:264), consistently known by this name during the following 73 years. Important publications using Günther's emendation and thereby stabilizing the spelling are Boulenger's (1882) *Catalogue of the Batrachia Salientia s. Ecaudata in the Collection of the British Museum*, Gadow's (1901) *Amphibia and Reptiles*, and Noble's classic works dealing with amphibian phylogeny extending from 1922 to 1931. During this period, workers in New Zealand such as Hutton (1873), McCulloch (1919), Archey (1922), and Oliver (1925-27) followed Günther's lead.

Turbott (1942:247) drew attention to Günther's spelling change and emphasized the fact that Fitzinger's original spelling should be retained. This view was later reiterated by Myers and Carvalho (1945:17, footnote 5), Mittleman and Myers (1949:57, footnote 1), and Stephenson (1951:18, footnote). The usage of *Leiopelma* by Drs. N. G. and E. M. Stephenson in their recent series of detailed studies on all three species of the genus (*L. hochstetteri*, *L. hamiltoni*, and *L. archeyi*) has no doubt been largely responsible for the increased popularity of Fitzinger's spelling during the last 20-odd years.

Using primary literature sources since 1861, we have counted the number of authors (not works) using *Leiopelma* Fitzinger, 1861, and *Liopelma* Günther, 1868 (Table 1). During the 1960s there was a fourfold increase in favor of *Leiopelma*. Interestingly, since 1950

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TABLE 1. Number of authors using *Leiopelma* Fitzinger, 1861, and *Liopelma* Günther, 1868, from 1861 to 1970.

Time span	<i>Leiopelma</i>		<i>Liopelma</i>		Combined total
	No.	Percent	No.	Percent	
1861-1939	3	10.3	26	89.7	29
1940-1949	7	63.6	4	36.4	11
1950-1959	16	66.7	8	33.3	24
1960-1970	47	79.7	12	20.3	59

all New Zealand workers, so far as we are aware, have consistently employed *Leiopelma* in their writings.

Article 32 (a) (ii) of the International Code of Zoological Nomenclature (1964) makes it clear that *Liopelma* Günther, 1868, is an unjustified emendation and therefore is a junior objective synonym of *Leiopelma* Fitzinger, 1861. Strict application of the Law of Priority (Art. 23) would ensure the stability and universality of the currently more widely used senior synonym. Accordingly, we have appealed to the International Commission on Zoological Nomenclature for validation of *Leiopelma* Fitzinger, 1861, and suppression of *Liopelma* Günther, 1868.

Recent uncertainty concerning the correct application of a family-group name to these animals has been due in part to a question of priority and in part to a lack of agreement concerning the spelling of the type-genera (see above). The oldest family-group name, Liopelmatina, was proposed by Mivart (1869:291). Article 34 (a) allows revision of Mivart's spelling to Liopelmatidae. As mentioned above, *Liopelma* Günther, the type-genus of Liopelmatidae, is a junior objective synonym of *Leiopelma* Fitzinger, 1861. Article 40 states that a family-group name based on a junior objective synonym is not to be changed unless an alternate name has won general acceptance.

Four alternate names have been proposed. They include, in chronological order, the (1) Ascaphidae Fjérvary (1923:178): Fjérvary originally proposed this name for the North American ribbed frog *Ascaphus* Stejneger (1899:899), a monotypic genus containing only *A. truei* Stejneger; (2) Liopelmidae Noble (1924:9): proposed as new but actually an erroneous spelling variant of Liopelmatidae Mivart, this family was created for both *Ascaphus* and *Liopelma* Günther, following "present day custom in using the oldest generic name in forming the family name"; (3) Leiopelmidae Turbott (1942:247): Turbott noted that "Fitzinger's original spelling. . . , should be retained and extended to the family name"; (4) Liopelmatidae Stephenson (1951:18). The Lipelmidae Romer (1933:437) is an erroneous subsequent spelling without nomenclatural status. Numbers 3 and 4 are nomenclatural equivalents, the latter being a justified emendation of Turbott's name.

It is true, apparently, that the name Ascaphidae has been used more frequently than any other name during the last 40 years; it

has been used regularly in the Zoological Record during that time (with *Leiopelmatidae*, 1959-1963). We have sampled the works of 54 authors who discuss both *Leiopelma* and *Ascaphus*, thereby recording a preference for one of the family names enumerated above. Of these, *Ascaphidae* had 20 usages, *Liopelmatidae* 14, *Leiopelmatidae* 10, *Liopelmatidae* 2, and *Leiopelmatidae* 9. Thus, although 20 authors used *Ascaphidae*, more than any other one name, 35 used one of the four variations based on the genus *Leiopelma* Fitzinger. Hence, lacking general acceptance of an alternate name for the *Liopelmatidae*, Mivart's name should be retained. However, it is undesirable for the family name not to reflect the correct original spelling of the generic name. Accordingly, we have petitioned the International Commission on Zoological Nomenclature through use of its plenary powers to emend *Liopelmatidae* to *Leiopelmatidae*, retaining Mivart's date (1869) and authorship.

Recently, some doubts have been raised concerning the confamilial status of *Ascaphus* and *Leiopelma*. Gorham (1966:1-2) recognizes the separate families *Ascaphidae* and *Leiopelmatidae*, without citation of source or justification, and Kuhn (1967:14) states "*Ascaphidae* . . . ; meist als synonym für *Leiopelmatidae* aufgefasst, neuerdings aber als selbständige Familie anerkannt." However, it seems desirable to stabilize the present nomenclatural instability and place the family-group name *Leiopelmatidae* on the *Official List of Family-Group Names in Zoology* and leave the name *Ascaphidae* in abeyance until such time as these two genera can be convincingly shown to warrant the same or separate family names.

The appeals mentioned above appeared in August 1971 (Fawcett and Smith, 1971). During the following few months, the Commission will welcome any endorsements or objections from interested systematists prior to final consideration of the case.

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