

## TRANSLATION OF THE ORIGINAL DESCRIPTION OF *KALOULA AUREATA* NUTPHAND, 1989 (ANURA: MICROHYLIDAE), WITH LECTOTYPE DESIGNATION

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**ABSTRACT.**– *Kaloula aureata* Nutphand, 1989 was described in the Thai language in a popular journal with limited distribution. This taxon was overlooked or ignored in recent literature. The last existing specimen of the type series of *K. aureata* was recently erroneously indicated in the literature as the holotype by monotypy. In order to facilitate the establishment of the taxonomic status of this taxon, we here provide a translation into English of its original description and designate a lectotype.

**KEYWORDS.**– *Kaloula aureata*, *Kaloula pulchra macrocephala*, Microhylidae, Surat Thani, Nakhon Si Thammarat, Thailand, lectotype designation.

### INTRODUCTION

The rich batrachofauna of the Kingdom of Thailand is still very imperfectly known, and new species for Science or for the Thai fauna are still regularly added. The exact number of taxa is difficult to assess because many genera are in critical need of revision. For instance, two recently published field guides on the amphibians of Thailand, Nutphund (2001) and Chan-ard (2003), respectively listed 112 and 141 taxa, and there was notable disagreement on the application of names among these publications. Among the discrepancies, Nutphund's opus (2001), where less than half of the photographed species were correctly identified (*vide* Ohler, 2003), gave an account for *Kaloula aureata* Nutphand, 1989. This latter taxon was not considered by Chan-ard (2003) nor by most recent checklists, even by Thai authors such as Nabhitabhata et al. (2004, who listed 132 amphibian species for Thailand). A recent comment on the taxonomic status of *K. aureata*, with questionable statements about the type-material and type-locality, leads us to make the original description in Thai

available through its translation into English, and to list the currently available type-material in order to facilitate its further taxonomic evaluation.

### NUTPHAND'S ORIGINAL DESCRIPTION OF *KALOULA AUREATA*

The two-page original description can be translated as follows (translators' comments are indicated between square brackets):

“*Ungthong* [Thai common name: *ung* = bull-frog, *thong* = gold]. Golden Burrowing Frog, Golden Bull Frog [originally in English]. *Kaloula aureata* Nutphand (New species) [originally in Latin/English]. [laterodorsal photograph of an adult specimen, accompanied by the caption *ungthong*]. The size is similar to that of *ungang* (*K. pulchra* [sic]). The length from snout-tip to coccyx is about 6.5 centimeters. The habitus looks like that of *ungang* [*K. pulchra*] but the pattern is more beautiful. The ground color of the body is brown with irregular yellow marks, because there are many yellow marks and wide bands. There is more yellow surface than brown

surface. The bright yellow color gives a golden aspect to the whole body. The median dorsal marks are bright yellow. The lateral bands along the back are yellowish orange. The belly is white. All four legs show nearly white, faded yellow markings throughout their whole length until the finger tips. The exact characteristics are difficult to adequately describe. It appears that this species of *ung* is a new species (New sp.) [the content of these latter brackets originally in English], because there has never been any report on it previously for the whole long period during which amphibians were collected. Only five specimens of this *ung* species were obtained. It can thus be regarded as a rare species. All specimens come from the South [of Thailand]. The first specimen was sent from Surat Thani Province in Buddhist year 2519 [Christian Era's year 1976]. The following specimens were obtained from Nakhon Si Thammarat Province. Through interviews and investigations in the field localities, it appears that this *ung* species has a natural history close to that of *ungang*, but that it does not live in syntopy with *ungang*. Now it is under study in order to get more data and show more specificities of this species of *ung*. Professor Wichian Jirawong, member of the Royal Institute, Science Office, gave the following name for this species, "*aureata*" [originally in Latin], which means "covered with gold".

#### COMMENTS AND LECTOTYPE DESIGNATION

In the section devoted to *Kaloula pulchra* Gray, 1831, Frost (2004) listed *Kaloula aureata* as a synonym of *Kaloula pulchra macrocephala*, and *Kaloula macrocephala* as a synonym of *Kaloula pulchra*, referring in both instances only to Ohler (2003), although Ohler (2003) did not put *K. macrocephala* in synonymy with *K. pulchra*. Frost (loc. cit.) erroneously indicated "Nutphund, 2001" as author and publication date for *Kaloula aureata*, and noted "given in original publication as "Nutphund, 1989"", believing that the species' name first appeared in Nutphund (2001), and thus ignoring that the species was indeed actually described in 1989. In Frost's defense, it is true that the species account for *K. aureata* in Nutphund (2001) is misleading in that the photograph caption reads "*Kaloula*

(new sp.)", while the scientific name was given as "*Kaloula aureata* Nutphand 1989".

It is important to mention here that Nutphand and Nutphund are two of several English transliterations that the late Wirot Nutphand (1932-2005) alternatively used to sign his publications. For the same reasons as those explained by Webb & van Dijk (2004: 94), the best transliteration into English of his patronym is Nutphand, a spelling that he recommended one of us (OSGP) to use (Nutphand, in litt.) and that he used in the original description of *K. aureata*.

In a book review of Nutphund's (2001) opus on Thai amphibians, Ohler (2003) wrote: "Bourret (1942) described a subspecies *Kaloula pulchra macrocephala* (syntypes, Hanoi University B.35, adult male, B.36 adult female; type-locality: Indochina) showing indistinct dorsolateral bands and mid-dorsum covered by large-sized irregular patches. The holotype by monotypy of *Kaloula aureata* Nutphand, 1989 (MNHN 1997.4923, adult male, SVL 59.9 mm after preservation, donated by Nutphund to the Paris Museum; type-locality: Thung Song District, Nakhon Si Thammarat, Thailand) is figured p. 163 (Nutphund, 2001) and shows a similar dorsal pattern as the holotype of *Kaloula pulchra macrocephala*. The name *Kaloula aureata* Nutphand, 1989 is here tentatively considered a subjective junior synonym of *Kaloula macrocephala* Bourret, 1942".

Wirot Nutphand had offered one of us (OSGP) the last existing specimen (Nutphand, pers. comm.) of the series on which he based the description of *Kaloula aureata*. That specimen was later deposited in the Amphibia collections of the MNHN, Paris. It was identified by Ohler (2003) as the specimen illustrated on the color photograph provided in Nutphund (2001), identical to the black and white photograph given in the original description. Nutphund (2001) gave "South" for the species' distribution in Thailand, and noted that it did not live outside Thailand. He moreover indicated: "specimens collected: Thung Song District, Nakhon Si Thammarat Province". This probably caused Ohler (2003) to indicate that Thung Song District was the type-locality (an error repeated by Frost, 2004), while the original description stated "Surat

Thani Province” and “Nakhon Si Thammarat Province”.

According to the Articles 72.4.1 and 73.2 of the current International Code of Zoological Nomenclature (International Commission on Zoological Nomenclature, 1999), simply referred to hereafter as the Code, the five specimens mentioned in the original description would constitute the syntypal series and, collectively, the name-bearing type. In 1989, i.e., the year *K. aureata* was published, the former edition of the Code (International Commission on Zoological Nomenclature, 1985) was still applicable, and there was no obligation to explicitly designate a holotype or syntypes (contrary to the current rules, through Articles 73.2.1.1 and 72.3). Nutphand was thus in agreement with the Code by not formally designating the types. As stated in the original description, the type series consisted of five specimens, so the indication of MNHN 1997.4923 by Ohler (2003) as holotype by monotypy is twice erroneous, since on the one hand no holotype had been designated (cf Article 73.1) and on the other hand the mention of five specimens in the original description excludes monotypy. The Article 74.6 of the current Code (corresponding to the Article 74(b) in the former Code), being not applicable here, Nutphand (1989) having explicitly specified the existence of several (five) specimens in the type series, Ohler’s action cannot be regarded as a valid lectotype designation.

Some doubt remains about the taxonomic identity of *Kaloula aureata*, a name tentatively considered by Ohler (2003) as a subjective junior synonym of *Kaloula macrocephala* Bourret, 1942. Das et al. (2004: 106) uncritically accepted the synonymy which could however be regarded as an unavailable conditional act (see Article 15.1).

Southern Thailand is inhabited by two other *Kaloula* species: *K. baleata* (Müller, 1836), known from the provinces of Krabi, Narathiwat, Phang-Nga, Phuket, Surat Thani, Trang and Yala (see Nabhitabhata et al., 2004, Nutphand, 2001 and Pauwels et al., 1999, its northernmost localities until its recent remarkable record from southern Laos by Teynié et al., 2004), and *K. pulchra*, represented in all peninsular provinces, including Surat Thani and Nakhon Si Thamma-

rat (Nabhitabhata et al., 2004; Pauwels, pers. obs. in Surat Thani and Nakhon Si Thammarat provinces; Pauwels et al., 1999).

The type-locality of *Kaloula macrocephala* Bourret, 1942 is “Indochine”, “Tonkin: ? (pas de localité indiquée)” [“Indochina”, “Tonkin: ? (no locality indicated)”], i.e. extreme northern Vietnam, cf the map provided by Bourret (1942) (not simply “Indochina” as stated by Ohler, 2003, which is much vaguer).

Nutphand (2001) did not provide much additional information on *Kaloula aureata*’s morphology, only mentioning that the dorsal skin is finely granulated, the fingers are slender, and the toes tips are sometimes broadened into small disc-shaped pads. By its dorsal pattern, *K. aureata* seems readily distinguishable from the above mentioned two sympatric species and *K. mediolineata* Smith, 1917 from elsewhere in Thailand. A comparison between *K. aureata* and the illustrations of *K. pulchra macrocephala* provided by Bourret (1942: 490) shows differences in pattern and head morphology. Furthermore, given the large geographical gap between the known distributions of both taxa, situated in two distinct zoogeographical areas (see Inger, 1999; Pauwels et al., 2003; Teynié et al., 2004), the suggested synonymy of both taxa should be re-evaluated. To this end, we here designate the adult male MNHN 1997.4923 as lectotype for the species. Its collecting locality is “Nakhon Si Thammarat Province” (Nutphand, pers. comm.), which hence becomes the type-locality for *K. aureata* (Article 73.2.3).

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