INTRODUCTION

The Recent Aegloidea Dana, 1852, represented by the single genus, *Aegla* Leach, 1820, is unique among anomurans, not only because of its occurrence exclusively in freshwater, but because of its endemicity to South America. The first detailed report on the genus was given by Schmitt (1942b) in which 15 new species and two new subspecies were added to the four species recognized in the genus at the time. Schmitt’s treatise was superseded recently by the monograph of Bond-Buckup and Buckup (1994) who reviewed most of the 43 described taxa, placed four in synonymy and added 20 new species. There have been nine additional new species reported since their publication, with another three potentially new species identified through molecular studies awaiting formal descriptions. Thus, the current tally of aeglid species is 69 with another three suspected and currently under study.

HISTORY OF CLASSIFICATION

The first aeglid to be described was assigned to the genus *Galathea* Fabricius, 1793 by Latreille (1818). Schmitt (1942b) insisted that *Aegla* was a monotypic genus. Despite being exclusively freshwater in habitat, aeglids closest relatives were thought to be found somewhere among the galatheids (Schmitt, 1942b), and, until recently (McLaughlin et al., 2007) the family was classified as a member of the superfamily Galatheoidea, despite mounting evidence to the contrary.

INFRAORDER ANOMURA MACLEAY, 1838

Extant Superfamily Aegloeida, family Aeglidae

*Superfamily Aegloeida Dana, 1852*

*Family Aeglidae Dana, 1852*

DESCRIPTIVE TERMS AND CURRENT STATUS

**General morphology.** – The depressed and flattened carapace is separated into a narrow anterior region and broader posterior region by a distinct cervical groove. The integumental surface may be smooth or granular and often is marked by setiferous punctuations. The prominent rostrum is usually provided with a dorsal carina that extends to the epigastric prominence, to the protogastric lobe, or rarely the entire length of the carapace. The ocular orbits are well developed and each may or may not be armed with an acute orbital spine; each anterolateral carapace angle is drawn out into an anterolateral spine. Each ocular peduncle
is provided with a basal ring of small sclerites. While Martin & Abele (1986) scored the aeglid as lacking ocular acicles, McLaughlin et al. (2007) considered these sclerites homologous with paguroid ocular acicles. The corneas of the aeglid eyes are deeply pigmented. The antennules are three-segmented; the antennae five-segmented with segments 2 and 3 fused. Each third maxilliped is provided with a crista dentata, but no accessory tooth. Martin & Abele (1988) reported that aeglid gills resembled trichobranchiate gills distally and phyllobranchiate gills proximally. However, Boyko (2002) was convinced that the gill structure of aeglids was truly trichobranchiate. These gills are 13 in number and consist of one arthrobranch on the arthroidal membrane of each third maxilliped and paired arthrobranches on these membranes of pereopods 1–4; one pleurobranch is present on the body wall above each of pereopods 2–5.

The first pereopods are large, usually largest in males, chelate and asymmetrical. Pereopods 2–4 are developed as ambulatory legs; pereopod 5 is reduced, modified and usually carried under the carapace. Coxae of the fifth pereopods in adult males each has the vas deferens extruded into a short sexual tube. The pleon is well developed, calcified and adult males each has the vas deferens extruded into a short sexual tube. The pleon is well developed, calcified and adult males each has the vas deferens extruded into a short sexual tube. The pleon is well developed, calcified and adult males each has the vas deferens extruded into a short sexual tube.

Adult male pleopods on pleomere 2–5 are reduced to small “knobs” or are absent. Females have two-segmented, uniramous pleopods on pleomeres 2–5. Uropods are biramous, flattened and together with the telson form a tail-fan. The telson usually, but not always, is divided by a longitudinal suture.

Development. – Development in aeglids is direct; there are no zoeal stages. Females brood their eggs for 50 days to upward of six months (Greco et al., 2004; Rodrigues & Hebling, 1978), and the newly hatched juveniles remain beneath or in close proximity to the female’s pleon for 3–12 days, initially attached to the pleopods and other structures and subsequently exploratory in their movements, but always returning to the safety of the maternal pleon.

Current status. – The first real concern directed to the traditional inclusion of the Aeglidae in the superfamily Galatheoidea was that of Martin & Abele (1986), who, while not excluding the family, suggested a “more remote origin for aeglids than modern galatheoids.” Additional morphological evidence for major differences of the aeglids from the other galatheoids was provided by Martin & Abele (1988). Based on spermatological data, Tudge & Scheltinga (1988). Based on spermatological data, Tudge & Scheltinga (1988). Based on spermatological data, Tudge & Scheltinga (1988). Based on spermatological data, Tudge & Scheltinga (1988) suggested an independent and basal lineage for the Aeglidae. Even more convincing evidence for separation of the aeglids from the other galatheoids was provided by the molecular studies of Pérez-Losada et al. (2002a, 2002b, 2004) and the combined molecular and morphological studies of Ahyong & O’Meally (2004). However, it was only after another morphological review that the aeglids were formally removed from the Galatheoidea and transferred to their own major taxon, the Aegloidea (McLaughlin et al., 2007).

CHECKLIST

Family Aeglidae Dana, 1852

Aegla Leach, 1820

= Aegla Leach, 1820 (type species Galathea laevigata Latreille, 1818, by monotypy; gender feminine) = Aeglea Desmarest, 1825 (incorrect spelling)

Aegla abtao Schmitt, 1942

= Aeglea abato Schmitt, 1942 (misspelling of Aegla)

Aegla affinis Schmitt, 1942

= Aegla maidensis Bahamonde & López, 1963

= Aegla montana Ringuelet, 1960

= Aegla neauquensis affinis Ringuelet, 1948

Aegla alacalufi Jara & López, 1981

Aegla araudcianensis Jara, 1980

Aegla bahamondei Jara, 1982

Aegla camarotai Buckup & Rossi, 1977

Aegla castro Schmitt, 1942

Aegla cavernicola Türkay, 1972

Aegla chotchohol Jara & Palacios, 1999

Aegla concepcionensis Schmitt, 1942

= Aeglea concepcionensis Schmitt, 1942 (misspelling of Aegla)

Aegla denticulata denticulata Nicolet, 1849

= Aeglea denticulata Nicolet, 1849 (misspelling of Aegla)

Aegla denticulata lacostris Jara, 1989

Aegla expansa Jara, 1992

Aegla franca Schmitt, 1942

Aegla franciscana Buckup & Rossi, 1977

Aegla grisella Bond-Buckup & Buckup, 1994

Aegla hueicollensis Jara & Palacios, 1999

Aegla humahuaca Schmitt, 1942

Aegla inconspicua Bond-Buckup & Buckup, 1994

Aegla inermis Bond-Buckup & Buckup, 1994

Aegla intercalata Bond-Buckup & Buckup, 1994

Aegla intermedia Girard, 1855

= Aeglea intermedia Girard, 1855 (misspelling of Aegla)

Aegla itacolomiensis Bond-Buckup & Buckup, 1994

Aegla jarai Bond-Buckup & Buckup, 1994

Aegla juyayana Schmitt, 1942

Aegla laevis (Latreille, 1818) [Galathea]

= Aegla laevigata H. Milne Edwards & Lucas, 1843

[2]

= Aeglea levis Dana, 1855 (misspelling of Aegla and laevis)

Aegla lata Bond-Buckup & Buckup, 1994

Aegla leptochela Bond-Buckup & Buckup, 1994

Aegla leptodactyla Buckup & Rossi, 1977

Aegla ligulata Bond-Buckup & Buckup, 1994

Aegla longirostris Bond-Buckup & Buckup, 1994

[3]

Aegla manni Jara, 1980

Aegla marginata Bond-Buckup & Buckup, 1994

Aegla manuiflata Bond-Buckup & Santos, in Santos et al., 2009

Aegla microphthalma Bond-Buckup & Buckup, 1994

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Aegla muelleri Bond-Buckup & Buckup, in Bond-Buckup et al., 2010
Aegla nequensis Schmitt, 1942
Aegla obstipa Bond-Buckup & Buckup, 1994
Aegla occidentalis Jara, Pérez-Losada & Crandall, 2003
Aegla odobrechtii Müller, 1876
  = Aeglea odobrechtii Müller, 1876 (misspelling of Aegla)
  = Aeglea intermedia Moreira, 1901 (misspelling of Aegla; preoccupied specific name)
Aegla papudo Schmitt, 1942
Aegla parana Schmitt, 1942
Aegla parva Bond-Buckup & Buckup, 1994
Aegla paulensis Schmitt, 1942
  = Aegla odobrechtii paulensis Schmitt, 1942
Aegla peroba Hebling & Rodrigues, 1977
Aegla pewenchae Jara, 1994
Aegla plana Buckup & Rossi, 1977
Aegla platensis Schmitt, 1942
Aegla pomerana Bond-Buckup & Buckup, in Bond-Buckup et al., 2010b
  = Aegla prado Schmitt, 1942
Aegla renana Bond-Buckup & Santos, 2010, in Santos et al., 2010
Aegla ringueleti Bond-Buckup & Buckup, 1994
Aegla roilimayana Schmitt, 1942
Aegla rossiana Bond-Buckup & Buckup, 1994
Aegla rostrata Jara, 1977
Aegla saltensis Bond-Buckup & Jara, in Bond-Buckup et al, 2010a
  = Aegla sanlorenzo Schmitt, 1942
Aegla scamosa Schmitt, 1942
Aegla saltensis Bond-Buckup & Jara, in Bond-Buckup et al, 2010a
Aegla sanlorenzo Schmitt, 1942
Aegla squamosa Ringuelet, 1948
  = Aegla squamosa Ringuelet, 1960 (unjustified emendation)
Aegla schmitti Hobbs III, 1979
Aegla septentrionalis Bond-Buckup & Buckup, 1994
Aegla serrana Bond & Rossi, 1977
Aegla singularis Ringuelet, 1948
Aegla spectabilis Jara, 1986
Aegla spinimalpa Bond-Buckup & Buckup, 1994
Aegla spinosa Bond-Buckup & Buckup, 1994
Aegla strinatii Türkay, 1972
Aegla talcahuano Schmitt, 1942
Aegla uruguayana Schmitt, 1942
Aegla violacea Bond-Buckup & Buckup, 1994
Aegla n. sp. in preparation by Jara et al. [5]
Aegla n. sp. 1 [6]
Aegla n. sp.2 [6]
Aegla n. sp. 3 [7]

NOTES

[1] In a footnote to his description of two new species of Aegla, Schmitt (1942a), inadvertently listed the date of Leach’s generic description as 1920. In his subsequent monograph, Schmitt (1942b) gave the bibliographic reference to Leach’s description as 1820 [1821] without explanation. Some subsequent references to Leach’s publication have listed the date as 1821 (e.g., Martin & Abele, 1988; Jara et al., 2003) while others (e.g., Tudge & Scheltinga, 2002; Perez-Losada et al., 2004; De Grave et al., 2008) have cited it as 1820. The correct date of publication is ambiguous because the cover page for the volume gives the publication date as 1821, whereas the title page gives it as 1820. The Nomenclator Zoologicus (Neaves, 1939) cites the date of description of Aegla as 1820, thus we consider 1820 the correct date.


[3] In referring to spermatological evidence, Lemaître & McLaughlin (2009) cited the work of Tudge & Scheltinga (2002) on Aegla longirostris (sic). Despite being an incorrect transliteration or latinization, Bond-Buckup & Buckup (1994) described this taxon as Aegla longirostris, which must be accepted as an original spelling not justifiably emendable.

[4] Although authorship of these species is restricted to two individuals, the publications in which they appear are most frequently multiauthored as indicated following the authors’ names.


[6] These species were identified as potentially new species based on a phylogenetic analysis by Pérez-Losada et al. (2004). In Pérez-Losada et al. (2004), six distinct and unnamed lineages were identified and four have subsequently been described (Aegla renana identified as n. sp. 4 Santos et al. 2010, Aegla saltensis identified as n. sp. 6 Bond-Buckup et al., 2010a, Aegla pomerana identified as n. sp. 2 Bond-Buckup et al., 2010b, and Aegla muelleri as n. sp. 5 Bond-Buckup et al., 2010b).

[7] This is a potentially new species from Argentina currently under study.

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