



**Fig. 4.** Jaws and suspensorium of 60 mm SL female *Arcygbobius baliurus*, ex AMS I.21901–004, Bolinao fishmarket, Philippines. Scale bar = 1 mm.

on the side of the head, cycloid nape scales, the gill opening restricted to the pectoral fin base, eyes placed close together and high on head, protruding well above body profile, and the first dorsal spines usually elongate and filamentous. Additionally, the mostly coral reef genera *Exyrias*, *Istigobius* and *Fusigobius* all share a variably long branch of the oculoscapular canal extending under the eye and ending in the infraorbital pore (e.g. see Fig. 3 in Murdy and Hoese 1985). *Arcygbobius* has a very short branch to the infraorbital pore (Fig. 5).

The genus *Acentrogobius*, as exemplified by the type species *A. viridipunctatus* Valenciennes, shares a number of characters with *Arcygbobius*. *Acentrogobius* is presently a catch-all genus which has never been reviewed or even adequately defined, but probably consists of several taxa (which may include species variously placed in *Amoya* Herre, *Arenigobius* Whitley, *Yoga* Whitley, *Yongeichthys* Whitley and a number of undescribed species). Zeehan Jaafar of the National University of Singapore has just commenced a review of the genus (PhD thesis). For purposes of this paper, *A. viridipunctatus* (Fig. 6) and four taxa of similar morphology and transverse sensory papillae (*A. dayi* Koumans, *A. decaryi* Pellegrin, *A. simplex* Sauvage, *A. therezieni* Kiener) are considered to be probably congeneric. These five *Acentrogobius viridipunctatus*-type species have gill membranes attached to the isthmus well behind the rear margin of the preopercle (except for *viridipunctatus*, in which the membranes

attach just below or slightly anterior to the margin) versus wide gill opening free of isthmus to below the eye in *Arcygbobius*; they have 2–5 rows of teeth, with the outer row teeth in both jaws enlarged and curved, and a large curved canine tooth at the side of the lower jaw versus all teeth small with no distinct canines; the opercle is variably covered with small scales and the cheek naked (*viridipunctatus* has a small patch of scales at the top of the cheek behind the eye) versus large scales covering the cheek and opercle; the predorsal is naked or has 19–31 scales reaching to above the preopercle (*viridipunctatus* has 25–31 predorsal scales which reach to close behind the eyes) versus 8–11 large scales reaching close up to behind the eyes; and the infraorbital pore opens more or less directly from the oculoscapular canal versus the pore opening at the end of a short infraorbital canal. *Acentrogobius viridipunctatus* also differs from other *Acentrogobius* species in having a somewhat horizontally elongate infraorbital pore, similar to the even more elongate pore in *Aulopareia* (*Acentrogobius cyanomos* Bleeker may have a somewhat elongate pore, but a longitudinal papillae pattern).

In summary, *Arcygbobius* has a different set of characters from existing gobiine genera, and we consider that it is better to prevent the species from being maintained as a *Gnatholepis* or *Acentrogobius*, by assigning it to its own genus, until further work can be done to clarify relationships. This is not very satisfactory, given the size of the phylogenetic problem