



## Cardinalfishes of the genus *Nectamia* (Apogonidae, Perciformes) from the Indo-Pacific region with descriptions of four new species

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### Abstract

The status of *Nectamia* is re-examined. General morphology including gill arches, cephalic lateralis pores, dorsal-fin elements, scale characteristics and results from recent contributions support recognition as a genus rather than a subgenus. Nine species are removed from *Ostorhinchus* and placed in *Nectamia*. Neotypes are established for *Apogon fuscus*, the type species of *Nectamia* and for *N. bandanensis*. Four undescribed species, *Nectamia ignitops*, *N. luxuria*, *N. similis*, and *N. viria*, having been confused with *N. bandanensis*, *N. fusca* and *N. savayensis*. Two species, *Nectamia annularis* and *N. zebrinus* are endemic to the Red Sea. Meristics or morphometrics, absent good color patterns will not conclusively identify each species. A key to the species is provided. Four species are polymorphic with respect to number of gill rakers. Gill-raker variation can be associated with geographic patterns: Red Sea, East Africa plus Mascarene Plateau, China Sea, Indonesia plus Philippines, Palau to Wake I., and Southeast Indonesia-Coral Sea to Mangareva. Color patterns are used in an analysis of phylogeny of the species. Five names are treated as synonyms: *Apogon erdmani*, a synonym of *Nectamia annularis* and *Apogon guamensis*, *Apogon nubilus*, *Apogon ocellatus*, and *Apogon spongicolus*, as synonyms of *N. fusca*.

**Key words:** cardinalfishes, new species, neotype, phylogeny, *Apogon*, *Ostorhinchus*, *Pristiapogon*, *Pristicon*, *Zoramia*, *Apogon annularis*, *Apogon bandanensis*, *Apogon erdmani*, *Apogon fuscus*, *Apogon guamensis*, *Apogon savayensis*,