

**Título:** MOLECULAR PHYLOGENETICS OF GOBIOID FISHES (GOBIOIDEI)

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**Fecha de lectura:** 22/11/2013

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**Descriptores:**

> TAXONOMIA DE PECES

> ICTIOLOGIA

> BIOQUIMICA DE LA TAXONOMIA ANIMAL

> BIOQUIMICA MOLECULAR

**El fichero de tesis** no ha sido incorporado al sistema.

**Resumen:** Gobioides is one of the largest groups of teleost fishes with about 2000 species currently recognized. They are mainly marine, but also brackish and freshwater fishes that inhabit tropical and temperate regions worldwide. Gobioids are generally small-sized fishes that show a spectacular variety in morphology, ecology, and behaviour. Only a few studies (either morphological or molecular) have tackled the overall phylogeny of Gobioides, and a comprehensive, uncontested phylogenetic hypothesis of gobioid intrarelationships is still lacking. This Ph.D. thesis aims to unfold the phylogenetic relationships of gobioid fishes based on molecular data. The first part of the thesis aims to review and synthesise the approaches and methodologies that are most widely used in the field of molecular systematics and phylogenetics, as well as their state of knowledge and future trends. The second part of the thesis aims to assess and summarize previous research on molecular systematics of gobioid fishes, including the reanalysis of the most relevant molecular phylogenetic studies, and the reconstruction of a summary phylogeny in a super-matrix approach. The last part of the thesis aims to reconstruct a comprehensive multilocus phylogeny of gobioids encompassing most major lineages representing the overall diversity of the group. This robust phylogenetic hypothesis provides insights into the root of Gobioides, the interrelationships among gobioid lineages, the rapid cladogenesis in some gobioids, and the specific

phylogenetic placement of European gobies. The phylogenetic results of this Ph.D. thesis constitute the most compelling molecular phylogenetic hypothesis for Gobioidaei thus far.