

## Redescription of two species of wobbegongs (Chondrichthyes: Orectolobidae) with elevation of *Orectolobus halei* Whitley 1940 to species level

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### Abstract

Two closely related species of the genus *Orectolobus* (Orectolobidae), *O. ornatus* (De Vis) and *O. halei* Whitley, are redescribed based on fresh material from temperate eastern Australia. Although described as a subspecies by Whitley (1940), *O. halei* was formerly synonymized with *O. ornatus* because of the lack of research material to assess their conspecificity. Due to its smaller size, *O. ornatus* was previously thought to be the juvenile form of the larger *O. halei*. *Orectolobus ornatus* occurs from Port Douglas, (Queensland) to Sydney (New South Wales) whereas *O. halei* occurs from Southport (Queensland) around the southern coast to Norwegian Bay (Western Australia). Both species are commercially targeted within the hook and line fishery off New South Wales. *Orectolobus ornatus* differs from *O. halei* in color pattern, a smaller adult size, fewer dermal lobes at the posterior preorbital group, lower vertebral and spiral valve counts, and the absence of supraorbital knob. Morphometrically, *O. ornatus* has a longer pelvic fin to anal fin interspace, smaller pectoral fins, smaller head dimensions, and relatively smaller claspers in mature specimens.

**Key words:** Orectolobidae, *Orectolobus ornatus*, *Orectolobus halei*, redescription, NSW

### Introduction

Wobbegong sharks (family Orectolobidae Gill 1896) are bottom-dwelling sharks found in warm temperate to tropical continental waters of the western Pacific (Compagno 2001). They can be distinguished from all other sharks (except angel sharks, family Squatinidae) by their flattened and variegated bodies, and from all other elasmobranchs by possessing dermal lobes along the sides of the head. Wobbegongs also have a short, nearly terminal mouth in front of the eyes, nasoral grooves, circumnarial grooves and flaps, symphyseal grooves, large spiracles and dorsolateral eyes (Compagno 2001).