



Rediscovery of the Golden Snapper *Lutjanus Inermis* (Peters, 1869) (Perciformes: Lutjanidae) in the Gulf of California

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Abstract – Two specimens of *Lutjanus inermis*, the most unusual species of the genus in the tropical eastern Pacific region, were collected at La Ventana, Baja California Sur, Mexico in November 2005, 400 km northward from the type locality. The golden snapper can be recognized by its long anal fin, and its yellowish peduncle and caudal fin that sometimes present a reddish phase. Present record is the first documented and verified report supported by voucher specimens of *L. inermis* inside the Gulf of California since its original description in the last quarter of the nineteenth century, setting the northern geographic limit to the Cortes Province.

Key words – Lutjanidae, golden snapper, *Lutjanus inermis*, Gulf of California

1. Introduction

The members of the family *Lutjanidae*, commonly known as snappers, are moderately elongated, bottom-associated fishes inhabiting tropical and subtropical waters to depths of about 450 m, and include 21 genera and approximately 125 recognized species (Allen 1985). The subfamily *Lutjaninae* comprises six genera with 72 nominal species, and the genus *Lutjanus* has the highest representation with 64 species (Nelson 1994).

Ten species of snappers, grouped in two genera, are known presently in the tropical eastern Pacific (TEP): *Hoplopagrus*, a monotypic genus endemic to this region, and *Lutjanus*, which is represented by nine valid species (Allen 1995; Allen y Robertson 1998; Castro-Aguirre *et al.* 1999).

The golden snapper *Lutjanus inermis* (Peters 1869), previously placed in its own genus *Rabirubia*, is a small, open-water fish with a slender and fusiform body. Standard length is about 3.5 times of maximum depth (Allen 1985). This endemic TEP species ranges from Mexico to Colombia, and is easily distinguished from its Pacific congeners by its long anal fin with 10 to 11 soft rays (seven to nine in others), and its yellowish peduncle and caudal fin that sometimes present a reddish phase (Allen 1995).

Franke and Acero (1992) have recognized the golden snapper as the rarest species of its genus in the region. Thomson *et al.* (2000) wrote: "It reportedly ranges from the lower Gulf of California to Panama. We have not collected this poorly known species but have included it in our checklist of reef fishes". This species was not reported in the catalog of fishes of Baja California Sur (B.C.S.) by De La Cruz-Agüero *et al.* (1997), but Castro-Aguirre *et al.* (1999) report this species based on the holotype collected in the mouth of the Gulf of California and on fish caught by K.E. Ricker in 1957 near Chamela bay, Jalisco, outside the Gulf. Allen (1985) and Allen and Robertson (1994) establish its range from the central Pacific coast of Mexico to Panama, but not inside the Gulf, and Humann and Deloach (2004) report its distribution as "absent in the Gulf of California". All this incongruous information placed doubt on the recent presence of the golden snapper in the Gulf of California, and this doubt was increased by the lack of physical or documented evidence. Here we report the first documented observation of *L. inermis* in the Gulf of California since its original description in 1869.

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2. Material and Methods

In this work we report two specimens, one of which constitutes a new size record for the species with 360 mm total length (see: Froese and Pauly, 2006). The snappers were caught on November 15 2005, off La Ventana, B.C.S., Mexico (24°03'42"N, 109°55'32"W), by local fishermen using hook and line, confirming the occurrence of this species in the southern Gulf of California. Identification followed Allen (1985; 1995), and relied on the number of fin rays and body coloration. The main measurements, count data and other curatorial information are listed in Table 1. The specimens were cataloged and deposited in the Ichthyological Collection (CI) of the Centro Interdisciplinario de Ciencias Marinas, in La Paz, B.C.S., Mexico (CICIMAR-CI 5863) (Fig. 1). This record extends the distributional range by nearly 400 km northward from the type locality, and approximately 100 km from other museums records (see below), setting the northern geographic limit to the Cortes Province (*sensu* Briggs 1974).

3. Results and Discussion

Before the record of *L. inermis* here presented, the Marine Vertebrate Collection of the Scripps Institution of Oceanography (SIO) at San Diego, California, USA, had a verified record of 21 juveniles collected in 1975 at Los Frailes (B.C.S.) submarine canyon (SIO 75-513) (P. Hastings, pers. comm.), although its presence has not been published elsewhere. The first documented record of the golden snapper in the Gulf of California corresponds to its

Table 1. Morphometrics and meristics of the two individuals of the golden snapper *Lutjanus inermis* (Peters, 1869) caught in the Gulf of California (CICIMAR-CI 5863). Morphometrics are expressed as percentage of standard length. Total length, fork length and the standard length are in millimeters.

Characteristics	No.1	No.2
Dorsal fin rays	X-13	X-14
Anal fin rays	III-10	III-10
Pectoral fin rays	16	16
Weight (eviscerated) (g)	322.6	404.0
Total length	342	360
Fork length	307	325
Standard length	272	290
Head length	33.5	32.8
Predorsal length	37.9	38
Maxillary length	12.5	12.8
Eye length	7	6.9
Preorbital length	12.5	11
Postorbital length	13.6	14.1
Pectoral fin length	19.5	19
Pelvic fin length	14.7	15.5
Anal fin length	16.2	16
Dorsal fin length	48.9	47.2
Body height	27.6	27.6
Interorbital space	9.2	10.7
Radio eye-head	4.8	4.75
Radio height-standard length	3.63	3.63

diagnosis by W.C.H. Peters in 1869, with material collected at Mazatlan, Sinaloa. The only other published record of *L. inermis* for the zone, in a checklist by Breder (1936), belongs to the Ichthyology Collection of the Yale Peabody Museum's Division of Vertebrate Zoology (YPM 579).

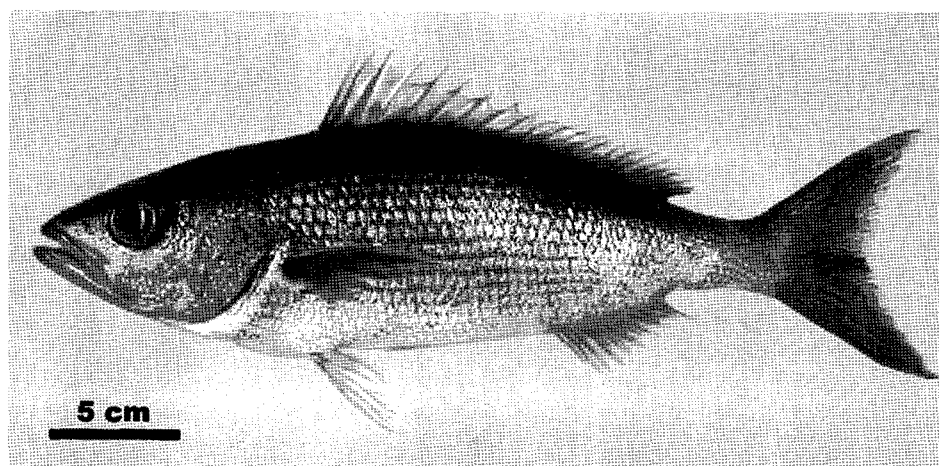


Fig. 1. *Lutjanus inermis* (Peters, 1869), 360 mm total length, caught in the Gulf of California (CICIMAR-CI 5863).

However, the YPM's specimen, caught during the oceanographic expedition of the "Pawnee II" at TEP during 1926, was apparently mounted by a taxidermist and was subsequently lost (G. Watkins-Colwell, pers. comm.). According to YPM's museum catalog records, the collection locality of that specimen was "Gulf of California", but Breder (1936) cited it as "San José del Cabo" (B.C.S.).

The taxonomy of *Lutjanus* is apparently well defined in the TEP (e.g. Allen 1985), although Walford (1974) suggested that it was an undescribed species in the area. Franke and Acero (1992) suggested that *L. inermis* should be redescribed because they detected differences between some of their measurements and counts and those presented by Allen (1985). We noticed discrepancies too, mainly in the height-standard length ratio and the eye-head ratio. In the first case, our value of 3.63 is higher than those of Allen (1985) at 3.5, and of Franke and Acero (1992) at 3.3-3.4, indicating that our individuals are more slender. Secondly, the eye-head ratio also shows big differences. Our values came out at 4.75 and 4.80 in contrast to the 4 indicated by Allen (1985), so not only are our specimens more slender, but they have smaller eyes as well.

The former dearth of golden snapper specimens in the area, despite intensive ichthyological collecting, reinforced the taxonomic disagreement and its dubious distributional status. At present there is a small traditional fishery in the La Ventana – El Sargento region, and personal communication with marine biologist L.A. Burnes-Romo led us to know that the golden snapper is also fished at San Jose island, about 150 km north of La Ventana. It's obvious that *L. inermis* needs to be reviewed and redescribed as indicated before, but additional material must be examined before any conclusion can be drawn. At the genus level, new taxonomic keys must be made because some of them are inaccurate or unclear (Franke and Acero 1992).

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