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Albinism in Sailfish (*Istiophorus platypterus*) Found in the Coast of Colima, Mexico

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Abstract: An albino sailfish (*Istiophorus platypterus*), with 224 cm of total length was captured with a longline, 35 miles off Punta Campos, Colima, México. This is the first albinism case reported for sailfish in the coasts of Mexico.

Key words: Sailfish, *Istiophorus platypterus*, albinism, billfish, abnormalities in fishes

INTRODUCTION

Albinism is the lack of melanin, the most widespread pigment in animals. It can be generalized throughout the surface tissues or localized only on the skin^[1]. It is perhaps the most recessive family trait recognized by aquaculturists^[2].

Aquacultural research on several species as *Ictalurus furcatus* has revealed that albinism is inherited as a single autosomal recessive gene. The incidence of albinism is increased with the exposure of the eggs to heavy metals as As, Cd, Cu, Hg, Se and Zn^[3]. Deficiency in essential fatty acid has been correlated with albinism in flat-fish^[4]. Albinos occur in a variety of cultured species, including salmonids, cichlids, cyprinids and characins, and all sorts of albino ornamental fish are obtained in most parts of the world^[2]. It was found that low salinity reduces albinism rate in *Paralichthys olivaceus*^[5].

Total or partially albinism has been observed in cartilaginous fish as the dogfish *Centroscymus coelolepis*^[6] and the ray *Aetobatus narinari*^[7]. In bony fish, it has been reported in scorpaenid, *Sebastolobus macrochir*^[8], in catfish: *Ictalurus furcatus*^[3] and *Arius caelatus*^[9]. In moray *Muraena clepsydra*^[10] and *Cynoponticus savanna*^[11]. In *Haemulon sexfasciatus*^[12]. In freshwater fish, *Rhamdella minute albinos* have been observed^[13].

The sailfish (*Istiophorus platypterus*) is characterized to possess the superior jaw extremely elongated beyond the inferior jaw forming a long rostrum. Sailfish is present in all the tropical and sub-tropical seas of the world; however in the center and south of the Mexican Pacific an abundant concentration exist, that are captured with high frequencies^[14]. Its fishery is divided into: commercial and sport fishing.

This species has been studied by the National Fishing Institute through the Regional Center of Fishing Investigation in Manzanillo, Colima, since 1985 to 2004^[15-19]. During this period biological data of 67000 organisms have been registered from the captures of the commercial fleet in the Mexican Pacific Ocean and the tournaments of sport fishing that are carried out in the Mexican Pacific ports of Puerto Vallarta and Barra de Navidad, in Jalisco State, Manzanillo, Colima State; Lázaro Cárdenas, Michoacán State and Zihuatanejo, Guerrero State. Some abnormalities have been observed in the sampled organisms like external and internal parasites, tumors and broken bills as those described by Beardsley^[20] but this is the first time that an albino sailfish is observed. This organism was captured in November 30th of 2003 by a long-line of 400 fishhooks, 35 miles off Punta Campos in front of the coasts of Manzanillo, Colima, in the coordinates (18° 40' LW, 104° 43' LN) (Fig. 1). The sailfish is almost totally albino (Fig. 2) and it has only some dark spots in the dorsal fin (Fig. 3) and a couple of stains on its head (Fig. 4). The meristic characteristics of the organism are:

Total length (cm)	224.00
Body length (cm)	180.00
Eye-fork length (cm)	150.00
Body depth (cm)	33.00
Weight (kg)	20.58

The sex was not determined, because the fish was gutted. Except for its albinistic phenotype, the specimen was meristically and morphologically normal, for which it can be suggested that albinism had no effect on the life of this specimen, however, albinism probably increases

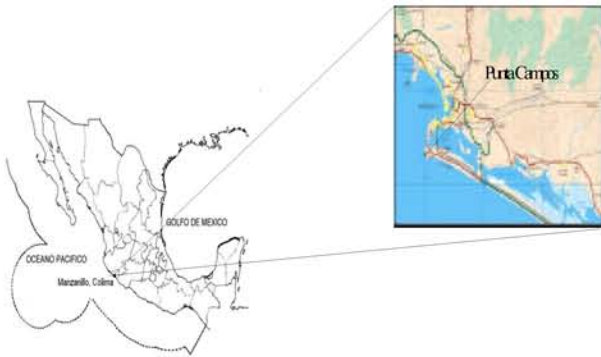


Fig. 1: Study area



Fig. 2: Albino sailfish *Istiophorus platypterus*. (conserved by taxidermy in the Manzanillo Fishing club A.C. Colima State, Mexico.)



Fig. 3: Dark dorsal fin areas



Fig. 4: Head dark areas

predation risk, specially during its first stages of growth, and might disturb communication in those species that use colours for visual recognition.

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