

## THE CARTILAGINOUS FISH OF MARINE VIETNAM - AN UPDATING THE CHECKLIST

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**Abstract:** This review article is dedicated to the checklist and updating of the chondrichthyans-related scientific research for the area of Vietnamese waters. The published data inventory was conducted for many decades (1964–2023) and updated the new record of cartilaginous species collected some years ago. The inventory was done using the collecting data by typing keywords consisting of the valid binomial name of the relevant species that were published with vouchers from the marine Vietnam. In the checklist published in 2016, 174 species of chondrichthyans were noted as present in the waters of Viet Nam, which is here used as a breakpoint in the timeline and confirms geographic range and synonyms. The new records from vouchers were in the depot of the museum and added to the list. After emendation, a total of 165 chondrichthyan species have been recorded in Vietnamese waters to date, of which 164 species have published records and one species first record for Vietnam, *Cephaloscyllium pictum* Last, Séret & White, 2008.

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**Keywords:** Biodiversity, Chondrichthyes, elasmobranchii, holocephali.

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### 1. INTRODUCTION

An annotated checklist of the chondrichthyan fishes (sharks, batoids and chimaeras) of the world examined about 1,188 species, comprising 16 orders, 61 families and 199 genera (Weigmann, 2016). Currently, the number of species totals of Chondrichthyes is 1,300 valid species worldwide, including two classes Elasmobranchii and Holocephali (Fricke et al., 2025). The chondrichthyan fishes (sharks, rays, and chimaeras) are one of the three lineages of fishes, and the most evolutionary distinct radiation of vertebrates (Stein et al., 2018). Cartilaginous fish occurs in a broad range of habitats, they are present from nearshore to the deep abyss, from the equator to the poles, and a few species are found in freshwater and hypersaline waters. They are most abundant in tropical and temperate marine waters (Carpenter & Niem, 1999, Compagno et al., 2005). Now loss of biodiversity is increasing very well on land, but it remains largely unknown in the ocean.

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Even small sharks and rays are becoming an endangered species in recent assessments by the IUCN Red List. Overexploitation is considered as one of the possible causes of their extinction in the near future (Dulvy et al., 2021). Taxonomy has a critical role in fisheries and ecological sciences and in assessment of threatened species (White et al., 2013). Deepwater sharks and rays are among the most sensitive marine vertebrates to overexploitation. One-third of threatened deepwater sharks are targeted, and half the species targeted for the international liver-oil trade are threatened with extinction (Finucci et al., 2024).

Vietnam's 3,260 km long coastline is dominated by the estuary, rocky reefs and islands. The EEZ of Vietnam's sovereignty occupies an area more than one million km<sup>2</sup>. Along coastline with 114 estuaries and inlets flowing into the sea, including two larger rivers: Mekong in the south and Red river in the north parts; the estuaries with mangrove patches and shallow nearshore waters extending to the sea provide habitat for sharks and rays. The rocky reefs formed mainly the central coast, where cool upwelling waters mixed with nutrient rich waters from depth layers and Mekong rivers in southwest monsoon, creating a highly productive gathering for marine fish, squids, sharks and rays. Vietnam has more than four thousand of large and small islands of which: Cat Ba, Bach Long Vi, Ly Son, Phu Quy, Con Dao, Phu Quoc, Paracel (Hoang Sa) and Spratly (Truong Sa) Islands have important habitats including coral reef, mangrove and sea-grass bed that provide critical nursery habitat for cartilaginous fishes (Vo & Ahmad, 2024). The marine waters of Vietnam were assessed to have a high biodiversity of cartilaginous fishes. Biodiversity of chondrichthyes is higher with 174 species recorded, comprising 93 species of sharks and 80 species of rays and skates and one belonging to chimeras (Le et al., 2016b). Landings are dominated by a few relatively common species, while sharks are mainly caught by longlines (> 80 %), trawl nets (> 11 %) and gill nets (> 8 %). Meanwhile, rays and skates are mainly caught by trawl nets (> 98 %) and gill nets (> 1 %) (SEAFDEC, 2017). Some threatened shark and ray species listed as CR, EN were recorded at landing sites such as Reticulated swellshark *Cephaloscyllium fasciatum*, Clouded angelshark *Squatina nebulosa*, Blackspotted catshark *Halaelurus buergeri* (IUCN, 2024). The large number of VU species recorded at almost all landing sites such as Longtail butterfly ray *Gymnura poecilura*, Jenkins' whipray *Pateobatis jenkinsii*, Grey bamboo shark *Chiloscyllium griseum*, Graceful catshark *Proscyllium habereri* etc, which represents recognition in Vietnamese waters (Vo et al., 2023). Recent assessment shows that Vietnam's seas have more than 50 species of cartilaginous fish that are threatened and estimated to be declining population and at risk of extinction (Vo et al., 2024). In recent years, many specimens have been obtained as new records for cartilaginous fish in

Vietnam. On the other hand, some previously recorded species may be taken as misidentified, they are not found in the India - West Pacific ocean or mistakenly considered a valid species to be a synonym of one other (White et al., 2010, White & Moore, 2013) or were newly described with vouchers collected in Vietnam (White et al., 2013). Therefore, the revised species names needed to be corrected and first records were added to the checklist. They proposed a list of species and sample collection methods for research and conservation. The checklist and new records are also essentially to national and regional species conservation plans (FAO, 2021).

## 2. MATERIALS AND METHODS

The data for the checklist were obtained based on the examined specimens in museum collections of OIM (Institute of Oceanography) as well as from an exhaustive search of literature, checklists, proceedings of scientific conferences, species catalogues, field and regional guides and research articles. The checklist was then aligned with the species list including Le et al. (2016b), Tran & Nguyen (1985), Ministry of Fisheries (1996), Nguyen (2001a), Nguyen & Tran (1994) and other main documents from some waters in Vietnam (Tab.1). The unpublished data on cartilaginous fishes, collected and recorded in Vietnamese waters between 2010 and 2020 (Nguyen & Nguyen, 2022; Vo et al., 2013; Vo et al., 2023), along with voucher specimens of new records from the collection of V.Q.V., were used in this study..

The identification of the specimens follows Ebert et al. (2021), Last et al. (2016) and Last & Stevens (2009). The classification system of fish orders and families follows (Fricke et al., 2025). The red list categories and criteria of shark and ray species according to the Vietnam Red Data Book 2024 (Vo et al., 2024) and the IUCN Red List of Threatened Species version 2024-2 (IUCN, 2024).

**Tab. 1.** *The list of the publication of cartilaginous fishes in Vietnam (only the counted publications with five or more species)*

Resources	Number of species	Resources	Number of species
Le et al. (2016b)	174	Nguyen (1998)	13
Ministry of Fisheries (1996)	131	Nguyen & Vo (2012)	13
Tran & Nguyen (1985)	131	Tran & Nguyen (1964)	12
Nguyen (2001a)	116	Vo et al. (2013)	12
Nguyen & Tran (1994)	91	Chu et al. (1998)	11
Nguyen & Nguyen (2022)	78	Nguyen (2002)	11
Orsi (1974)	66	Muda et al. (2001)	10

Bui et al. (2018)	62	Le et al. (2016a)	8
Vo et al. (2024)	56	Nguyen et al. (2007)	8
Tran et al. (2022)	38	MOST & VAST (2007)	8
Vo et al. (2023)	28	Nguyen (2003)	7
Vu & Tran (2009)	28	Nguyen et al. (2017)	7
Vu (1994)	24	Vo & Vo (2013)	7
Vu (2009)	22	Le et al. (2021)	6
Fourmanoir & Do (1965)	22	Tong & Nguyen (2015)	6
Nguyen & Nguyen (2005)	15	Nguyen (1996)	5
Thai et al. (2001)	15	Nguyen (2001b)	5

### 3. RESULTS AND DISCUSSION

#### 3.1. New record species

Order *Carcharhiniformes*

Family *Scyliorhinidae*

*Cephaloscyllium pictum* Last, Séret & White, 2008

**Vietnamese name:** Cá nhám mèo sơn.

**English name:** Painted swellshark.

**Synonyms:** *Cephaloscyllium pictum* Last, Séret & White, 2008. - Last et al. (2008): 134, Figs. 3-4. (type locality: Tanjung Luar fish landing site, Lombok, Indonesia, 8°45'S, 116°35'E). - Clark & Randall (2011): 27. - Weigmann (2016): 38. - Ebert et al. (2021): 422. - Claassens et al. (2025): 1.

**Specimen examined:** Fi.08743, female 597 mm TL, Hàm Tử fishing port, ca. 13°46'25"N, 109°14'50"E, Quy Nhon city, Binh Dinh province, Vietnam, 22 August 2018.

**Description on specimens:** This medium-sized species possess the following set of characters: origin of first dorsal fin is over the centre of pelvic-fin base; prenarial length is 3.4 % TL; preorbital snout length is 1.8 times the prenarial length, 3.3 in prepectoral length, 6.7 in prepelvic length; snout-vent length long, 49.8 % TL; width of nostril 2.7 % TL; eye-spiracle space narrow, 0.5 % TL; pectoral fin medium-sized, its height 12.2 % TL, posterior margin 11.4 % TL; anal fin tall, 3.8 % TL; anal-caudal space 6.1 % TL; precaudal length 77.6% TL; interdorsal space 8.6 % TL; teeth with 3-5 cusps near symphysis of upper jaw; unicuspidate or weakly tricuspidate flank denticles; greatly enlarged denticles on back absent; moderate tooth count in each jaw 60-72 teeth.

Colour pattern: upper half of body is very dark, with a weak variegated pattern of spots and blotches, no saddles or are barely detectable; dorsal fins are mostly dark variegated; large, blackish blotch found over the gills; posterior margin of terminal lobe of caudal fin with dark, anteriorly directed, v-shaped marking; upper surface of pelvic fin with a well-defined, blackish median blotch; without dark saddle extending onto caudal peduncle above the origin of ventral lobe of caudal fin (Fig. 1).



Fig. 1. Fresh specimen of *Cephaloscyllium pictum* Last, Séret & White, 2008, Fi.07843

### 3.2. The updated checklist

The recent chondrichthyan species of marine Vietnam are presented in the checklist in Tab. 2 with 165 species of 46 families and 12 orders; in which Carcharhiniformes are 55 species; next Myliobatiformes with 44 species (Fig. 2). Number of threatened species according to the Vietnamese Red List (2024) are 56 species and 120 species by classification of Vietnam Red Data Book (2024).

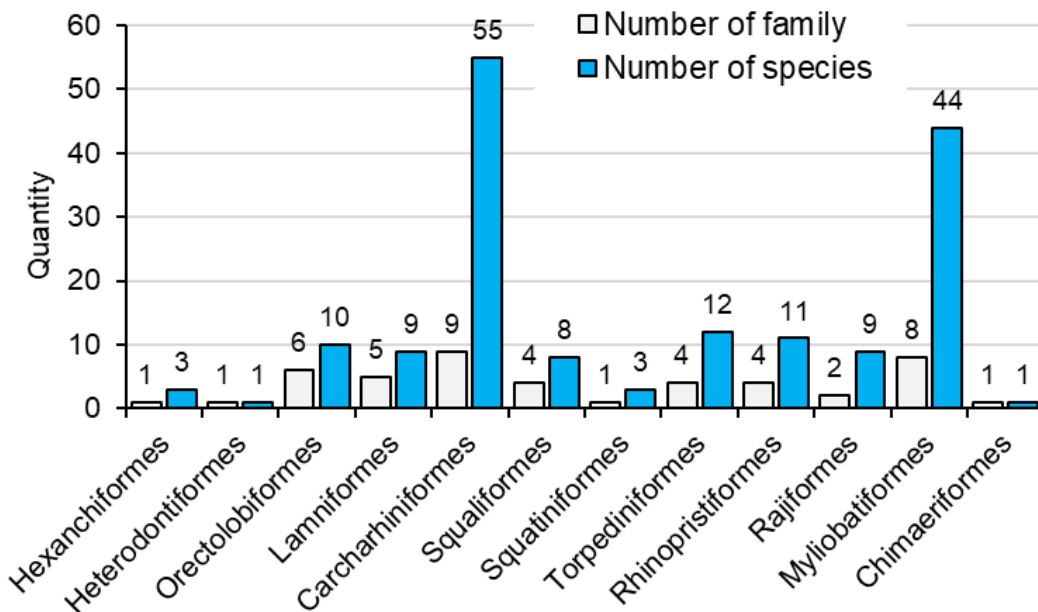


Fig. 2. The number of families and species of orders

*Table 2. The checklist of the marine chondrichthyan fishes in the Vietnam*

Scientific name	Vietnam Red Data Book (2024)	IUCN Red List (2024)	Commercial Value
<b>Order: HEXANCHIFORMES</b>			
<b>Family: Hexanchidae</b>			
Cá mập bảy lỗ mang mõm nhọn (Sharpnose sevengill shark): <i>Heptanchias perlo</i> (Bonnaterre, 1788)		NT	+
Cá mập bảy lỗ mang mõm rộng (Broadnose sevengill shark): <i>Notorynchus cepedianus</i> (Péron, 1807)		VU	+
Cá nhám sáu lỗ mang mõm tù (Bluntnose sixgill shark): <i>Hexanchus griseus</i> (Bonnaterre, 1788)		NT	+
<b>Order: HETERODONTIFORMES</b>			
<b>Family: Heterodontidae</b>			
Cá nhám hổ (Zebra bullhead shark): <i>Heterodontus zebra</i> (Gray, 1831)		LC	
<b>Order: ORECTOLOBIFORMES</b>			
<b>Family: Rhincodontidae</b>			
Cá nhám voi (Whale shark): <i>Rhincodon typus</i> Smith, 1828	EN	EN	+
<b>Family: Parascylliidae</b>			
Cá nhám râu (Barbelthroat carpetshark): <i>Cirrhoscyllium exopolitum</i> Smith & Radcliffe, 1913		DD	
<b>Family: Orectolobidae</b>			
Cá nhám râu nhật bản (Japanese wobbegong): <i>Orectolobus japonicus</i> Regan, 1906		LC	
<b>Family: Hemiscylliidae</b>			
Cá chèo bẻo vằn nâu (Brownbanded bambooshark): <i>Chiloscyllium punctatum</i> Müller & Henle, 1838		NT	+
Cá chèo bẻo xám (Grey bambooshark): <i>Chiloscyllium griseum</i> Müller & Henle, 1838	VU	VU	+
Cá nhám trúc in-đô (Hasselt's bambooshark): <i>Chiloscyllium hasseltii</i> Bleeker, 1852	EN	EN	

Cá nhám trúc vằn ấn độ (Slender bambooshark): <i>Chiloscyllium indicum</i> (Gmelin, 1789)	EN	VU	
Cá nhám trúc chấm trắng (Whitespotted bambooshark): <i>Chiloscyllium plagiosum</i> (Anonymous [Bennett], 1830)		NT	+
<b>Family: Stegostomatidae</b>			
Cá nhám nhu mì (Zebra shark): <i>Stegostoma tigrinum</i> (Forster, 1781)	EN	EN	+
<b>Family: Ginglymostomatidae</b>			
Cá nhám râu miệng hẹp (Tawny nurse shark): <i>Nebrius ferrugineus</i> (Lesson, 1831)	VU	VU	+
<b>Order: LAMNIFORMES</b>			
<b>Family: Carchariidae</b>			
Cá nhám bò mộng (Sand tiger shark): <i>Carcharias taurus</i> Rafinesque, 1810	CR	CR	+
Cá nhám cát (Indian sand tiger): <i>Carcharias tricuspidatus</i> Day, 1878		CR	+
<b>Family: Odontaspidae</b>			
Cá mập hổ răng nhỏ (Smalltooth sand tiger): <i>Odontaspis ferox</i> (Risso, 1810)		EN	+
<b>Family: Pseudocarchariidae</b>			
Cá mập sấu (Crocodile shark): <i>Pseudocarcharias kamoharai</i> (Matsubara, 1936)		LC	
<b>Family: Alopiidae</b>			
Cá nhám đuôi dài (Pelagic thresher): <i>Alopias pelagicus</i> Nakamura, 1935	EN	EN	+
Cá nhám đuôi dài mắt to (Bigeye thresher): <i>Alopias superciliosus</i> Lowe, 1841	VU	VU	+
Cá nhám đuôi dài mõm ngắn (Thresher): <i>Alopias vulpinus</i> (Bonnaterre, 1788)		VU	+
<b>Family: Lamnidae</b>			
Cá mập trắng lớn (Great white shark): <i>Carcharodon carcharias</i> (Linnaeus, 1758)		VU	+
Cá Nhám thu, Cá nhám chuột (Shortfin mako): <i>Isurus oxyrinchus</i> Rafinesque, 1810	VU	EN	+
<b>Order: CARCHARHINIFORMES</b>			
<b>Family: Scyliorhinidae</b>			
Cá nhám lông nhung (Blotchy swell shark): <i>Cephaloscyllium umbratile</i> Jordan & Fowler, 1903		NT	
Cá nhám mèò phồng lùn (Sarawak pygmy swell shark): <i>Cephaloscyllium sarawakensis</i> Yano, Ahmad & Gambang, 2005		CR	

Cá nhám mèò bóng bay (Balloon shark): <i>Cephaloscyllium sufflans</i> (Regan, 1921)				NT
Cá nhám mèò sơn (Painted swellshark): <i>Cephaloscyllium pictum</i> Last, Séret & White, 2008				DD
Cá nhám mèò đầu tròn (Draughtsboard shark): <i>Cephaloscyllium isabellum</i> (Bonnaterre, 1788)				LC
Cá nhám mèò vằn (Reticulated swellshark): <i>Cephaloscyllium fasciatum</i> Chan, 1966	CR			CR
<b>Family: Atelomycteridae</b>				
Cá nhám chấ̀m (Coral catshark): <i>Atelomycterus marmoratus</i> (Anonymous [Bennett], 1830)				NT
Cá nhám chấ̀m Bali (Bali catshark): <i>Atelomycterus baliensis</i> White, Last & Dharmadi, 2005				LC
<b>Family: Pentanchidae</b>				
Cá nhám chấ̀m nhỏ (Speckled catshark): <i>Halaelurus boesemani</i> Springer & D'Aubrey, 1972				VU
Cá nhám đuòì gai (Gecko catshark): <i>Galeus eastmani</i> (Jordan & Snyder, 1904)				LC
Cá nhám hoa mai (Blackspotted catshark): <i>Halaelurus buergeri</i> (Müller & Henle, 1838)	EN			EN
<b>Family: Proscylliidae</b>				
Cá nhám môi nhấ̀n (Graceful catshark): <i>Proscyllium habereri</i> Hilgendorf, 1904				VU
Cá nhám môi nhấ̀n biển sâu (Pygmy ribbontail catshark): <i>Eridacnis radcliffei</i> Smith, 1913				LC
<b>Family: Triakidae</b>				
Cá mập chó (Banded houndshark): <i>Triakis scyllium</i> Müller & Henle, 1839				EN
Cá nhám tro, cá ngéo (Spotless smooth-hound): <i>Mustelus griseus</i> Pietschmann, 1908	EN		EN	+
Cá nhám điể̀m sao (Starspotted smooth-hound): <i>Mustelus manazo</i> Bleeker, 1854	EN		EN	+
<b>Family: Hemigaleidae</b>				
Cá nhám răng chia đuòì dài (Straight-tooth weasel shark): <i>Paragaleus tengi</i> (Chen, 1963)				EN
Cá nhám răng chia miệng hẹp (Sicklefin weasel shark): <i>Hemigaleus microstoma</i> Bleeker, 1852	VU		VU	
Cá nhám răng chia miệng rộng (Hooktooth shark): <i>Chaenogaleus macrostoma</i> (Bleeker, 1852)	VU		VU	
Cá nhám răng chia vây bụng nhọn (Snaggletooth shark): <i>Hemipristis elongata</i> (Klunzinger, 1871)	VU		EN	+
<b>Family: Carcharhinidae</b>				
Cá mập Borneo (Borneo shark): <i>Carcharhinus borneensis</i> (Bleeker, 1858)				CR
Cá mập chanh vây lưỡì liể̀m (Sicklefin lemon shark): <i>Negaprion acutidens</i> (Rüppell, 1837)				EN

Cá mập con thoi (Spinner shark): <i>Carcharhinus brevipinna</i> (Valenciennes, 1839)	VU	VU	+
Cá mập da trơn (Silky shark): <i>Carcharhinus falciformis</i> (Bibron, 1839)	VU	VU	+
Cá mập đỉnh vây trắng (Silvertip shark): <i>Carcharhinus albimarginatus</i> (Rüppell, 1837)		VU	+
Cá mập đuôi ngắn (Copper shark): <i>Carcharhinus brachyurus</i> (Günther, 1870)		VU	+
Cá mập galapagos (Galapagos shark): <i>Carcharhinus galapagensis</i> (Snodgrass & Heller, 1905)		LC	+
Cá mập mã lai (Blacktail reef shark): <i>Carcharhinus amblyrhynchos</i> (Bleeker, 1856)	EN	EN	
Cá mập sọc trắng (Graceful shark): <i>Carcharhinus amblyrhynchoides</i> (Whitley, 1934)	VU	VU	+
Cá mập mắt to (Pigeye shark): <i>Carcharhinus amboinensis</i> (Müller & Henle, 1839)		VU	+
Cá mập mắt trắng vây cao (Sandbar shark): <i>Carcharhinus plumbeus</i> (Nardo, 1827)	EN	EN	+
Cá mập miệng sâu (Grey sharpnose shark): <i>Rhizoprionodon oligolinx</i> Springer, 1964		NT	
Cá mập mũi to (Bignose shark): <i>Carcharhinus altimus</i> (Springer, 1950)		NT	+
Cá mập răng cong mũi to (Sliteye shark): <i>Loxodon macrorhinus</i> Müller & Henle, 1839		NT	
Cá Mập sẫm (Dusky shark): <i>Carcharhinus obscurus</i> (Lesueur, 1818)		EN	+
Cá mập thâm (Blacktip shark): <i>Carcharhinus limbatus</i> (Valenciennes, 1839)		VU	+
Cá mập trâu mắt trắng (Bull shark): <i>Carcharhinus leucas</i> (Valenciennes, 1839)		VU	+
Cá mập má trắng (Whitecheek shark): <i>Carcharhinus dussumieri</i> (Valenciennes, 1839)		EN	
Cá mập vây đen (Blacktip reef shark): <i>Carcharhinus melanopterus</i> (Quoy & Gaimard, 1824)		VU	+
Cá mập gốc răng cưa (Pondicherry shark): <i>Carcharhinus hemiodon</i> (Valenciennes, 1839)		CR	+
Cá mập vây đuôi có chấm (Spot-tail shark): <i>Carcharhinus sorrah</i> (Valenciennes, 1839)		NT	+
Cá mập vây trắng (Oceanic whitetip shark): <i>Carcharhinus longimanus</i> (Poey, 1861)	CR	CR	+
Cá mập vệt đen (Blackspot shark): <i>Carcharhinus sealei</i> (Pietschmann, 1913)		VU	
Cá nhám mõm dài (Hardnose shark): <i>Carcharhinus macloti</i> (Müller & Henle, 1839)		NT	
Cá mập sông hằng (Ganges shark): <i>Glyphis gangeticus</i> (Müller & Henle, 1839)		CR	
Cá mập xanh (Blue shark): <i>Prionace glauca</i> (Linnaeus, 1758)		NT	+
Cá nhám răng chéch dài (Milk shark): <i>Rhizoprionodon acutus</i> (Rüppell, 1837)		VU	
Cá nhám răng chéch vây ngắn (Spadenose shark): <i>Scoliodon laticaudus</i> Müller & Henle, 1838		NT	

Cá nhám trọc, Cá mập rạn san hô (Whitetip reef shark): <i>Triaenodon obesus</i> (Rüppell, 1837)	VU	VU	
<b>Family: Galeocerdonidae</b>			
Cá mập báo, cá mập báo hoa (Tiger shark): <i>Galeocerdo cuvier</i> (Péron & Lesueur, 1822)		NT	+
<b>Family: Sphyrnidae</b>			
Cá nhám búa (Smalleye hammerhead): <i>Sphyrna tudes</i> (Valenciennes, 1822)		CR	
Cá nhám búa có rãnh (Scalloped hammerhead): <i>Sphyrna lewini</i> (Griffith & Smith, 1834)	CR	CR	+
Cá nhám búa không rãnh (Great hammerhead): <i>Sphyrna mokarran</i> (Rüppell, 1837)	CR	CR	+
Cá nhám búa mõm tròn (Smooth hammerhead): <i>Sphyrna zygaena</i> (Linnaeus, 1758)		VU	+
Cá nhám cào (Winghead shark): <i>Eusphyra blochii</i> (Cuvier, 1816)		EN	
<b>Order: SQUALIFORMES</b>			
<b>Family: Dalatiidae</b>			
Cá mập răng đũa dao (Cookie cutter shark): <i>Isistius brasiliensis</i> (Quoy & Gaimard, 1824)		LC	
<b>Family: Etmopteridae</b>			
Cá nhám râu (Blackbelly lanternshark): <i>Etmopterus lucifer</i> Jordan & Snyder, 1902		LC	
<b>Family: Centrophoridae</b>			
Cá mập su vây lớn (Gulper shark): <i>Centrophorus granulosus</i> (Bloch & Schneider, 1801)		EN	
Cá mập su vây nhỏ (Smallfin gulper shark): <i>Centrophorus moluccensis</i> Bleeker, 1860		VU	
<b>Family: Squalidae</b>			
Cá nhám góc mắt to (Shortnose spurdog): <i>Squalus megalops</i> (Macleay, 1881)		LC	
Cá nhám góc mõm dài (Shortspine spurdog): <i>Squalus mitsukurii</i> Jordan & Snyder, 1903		EN	
Cá nhám góc mõm ngắn (Shortnose dogfish): <i>Squalus brevirostris</i> Tanaka, 1917		EN	
Cá nhám góc nhật bản (Japanese spurdog): <i>Squalus japonicus</i> Ishikawa, 1908	EN	EN	
<b>Order: SQUATINIFORMES</b>			
<b>Family: Squatinidae</b>			
Cá nhám đẹt chấm mắt (Ocellated angelshark): <i>Squatina tergocellatoides</i> Chen, 1963		EN	
Cá nhám đẹt chấm sao (Clouded angelshark): <i>Squatina nebulosa</i> Regan, 1906		EN	
Cá nhám đẹt nhật bản (Japanese angelshark): <i>Squatina japonica</i> Bleeker, 1858		CR	

**Order: TORPEDINIFORMES****Family: Platyrrhinidae**

Cá giống đĩa chấm vàng (Yellow-spotted fanray): *Platyrrhina tangi* Iwatsuki, Zhang & Nakaya, 2011 VU VU

Cá giống đĩa nhiều hàng gai (Chinese fanray): *Platyrrhina sinensis* (Bloch & Schneider, 1801) EN EN

**Family: Narkidae**

Cá đuối điện chấm trắng (Numbray): *Narke dipterygia* (Bloch & Schneider, 1801) VU

Cá đuối điện không vây lưng (Finless sleeper ray): *Temera hardwickii* Gray, 1831 VU

Cá đuối điện nhật bản (Japanese sleeper ray): *Narke japonica* (Temminck & Schlegel, 1850) VU VU

**Family: Narcinidae**

Cá đuối điện mũi hếch (Shortlip electric ray): *Narcine brevilabiata* Bessednov, 1966 VU VU

Cá đuối điện nâu (Brown numbfish): *Narcine brunnea* Annandale, 1909 NE

Cá đuối điện nhiều chấm (Darkfined numbfish): *Narcine maculata* (Shaw, 1804) VU VU

Cá đuối điện vây lưng trước (Tonkin numbfish): *Narcine prodorsalis* Bessednov, 1966 EN EN

Cá thụt (Spotted numbfish): *Narcine timlei* (Bloch & Schneider, 1801) VU

Cá xùa, cá nức (Chinese numbfish): *Narcine lingula* Richardson, 1846 VU

**Family: Torpedinidae**

Cá đuối điện (Marbled electric ray): *Torpedo marmorata* Risso, 1810 VU

**Order: RHINOPRISTIFORMES****Family: Rhinobatidae**

Cá giống dài có chấm (Angel fish): *Rhinobatos hynnicephalus* Richardson, 1846 EN

Cá giống dài lưỡi cày (Brown guitarfish): *Rhinobatos schlegelii* Müller & Henle, 1841 CR CR

**Family: Rhinidae**

Cá giống chàm trắng (Bottlenose wedgefsh): *Rhynchobatus australiae* Whitley, 1939 CR +

Cá giống gờ mắt cao (Eyebrow wedgefsh): *Rhynchobatus palpebratus* Compagno & Last, 2008 NT +

Cá giống mõm tròn (Bowmouth guitarfish): *Rhina ancylostomus* Bloch & Schneider, 1801 CR CR +

**Family: Glaucostegidae**

Cá giống đầu nhọn (Thouin ray): <i>Glaucostegus thouin</i> (Anonymous [Lacepède], 1798)	CR	CR	
Cá giống gai lưng, cá giống dài có hạt (Granulated guitarfish): <i>Glaucostegus granulatus</i> (Cuvier, 1829)		CR	
Cá giống mấu (Giant shovelnose ray): <i>Glaucostegus typus</i> (Anonymous [Bennett], 1830)	CR	CR	
<b>Family: Pristidae</b>			
Cá đao răng nhỏ (Largetooth sawfish): <i>Pristis microdon</i> Latham, 1794		CR	
Cá đao răng nhọn, Cá đao răng mõm dài (Pointed sawfish): <i>Anoxypristis cuspidata</i> (Latham, 1794)	CR	CR	
Cá đao xanh (Longcomb sawfish): <i>Pristis zijsron</i> Bleeker, 1851	CR	CR	
<b>Order: RAJIFORMES</b>			
<b>Family: Rajidae</b>			
Cá đuối quạt (Boeseman's skate): <i>Okamejei boesemani</i> (Ishihara, 1987)	VU	VU	
Cá đuối quạt Borneo (Borneo sand Skate): <i>Okamejei cairae</i> Last, Fahmi & Ishihara, 2010		VU	
Cá đuối quạt chấm tròn (Ocellate spot skate): <i>Okamejei kenojei</i> (Müller & Henle, 1841)		VU	
Cá đuối quạt gai nhọn (Sharpspine skate): <i>Okamejei acutispina</i> (Ishiyama, 1958)		VU	
Cá đuối quạt không vòng tròn (Yellow-spotted skate): <i>Okamejei hollandi</i> (Jordan & Richardson, 1909)	VU	VU	
Cá đuối quạt mõm dài (Acutenose skate): <i>Dipturus tenuis</i> (Jordan & Fowler, 1903)		NT	
Cá đuối quạt quảng đông (Kwangtung skate): <i>Dipturus kwangtungensis</i> (Chu, 1960)		DD	
<b>Family: Anacanthobatidae</b>			
Cá đuối quạt thân tròn Borneo (Borneo leg skate): <i>Sinobatis borneensis</i> (Chan, 1965)		LC	
Cá đuối thân đen (Blackbodied leg skate): <i>Sinobatis melanosoma</i> (Chan, 1965)		LC	
<b>Order: MYLIOBATIFORMES</b>			
<b>Family: Dasyatidae</b>			
Cá đuối bông (Scaly whipray): <i>Brevitrygon walga</i> (Müller & Henle, 1841)		NT	+
Cá đuối bông bleekeri (Bleeker's whipray): <i>Pateobatis bleekeri</i> (Blyth, 1860)		EN	
Cá đuối bông chấm xanh (Ribbontail stingray): <i>Taeniura lymma</i> (Fabricius, 1775)		LC	

Cá đuối bông da báo (Leopard whipray): <i>Himantura undulata</i> (Bleeker, 1852)		EN	
Cá đuối bông da gai châu phi (Porcupine whipray): <i>Urogymnus asperrimus</i> (Bloch & Schneider, 1801)		EN	
Cá đuối bông đen (Blackish stingray): <i>Hemistrygon navarrae</i> (Steindachner, 1892)	VU	VU	
Cá đuối bông đỏ (Whip stingray): <i>Hemistrygon akajei</i> (Müller & Henle, 1841)		NT	+
Cá đuối bông lùn đen (Dwarf black stingray): <i>Hemistrygon parvonigra</i> (Last & White, 2008)		DD	
Cá đuối bông đuôi ngắn (Short-tail stingray): <i>Bathytoshia breviceaudata</i> (Hutton, 1875)		LC	
Cá đuối bông đuôi vằn (Blue-spotted stingray): <i>Neotrygon kuhlii</i> (Müller & Henle, 1841)		DD	+
Cá đuối bông fava (honeycomb whipray): <i>Himantura fava</i> (Annandale, 1909)		NE	
Cá đuối bông hoa trắng (Sharpnose stingray): <i>Maculabatis gerrardi</i> (Gray, 1851)	EN	EN	+
Cá đuối bông hoa vện (Honeycomb stingray): <i>Himantura uarnak</i> (Gmelin, 1789)	EN	EN	
Cá đuối bông khơi (Pelagic stingray): <i>Pteroplatytrygon violacea</i> (Bonaparte, 1832)		LC	
Cá đuối bông lồi (Bennett's stingray): <i>Hemistrygon bennettii</i> (Müller & Henle, 1841)		VU	+
Cá đuối bông mõm nhọn (Pale-edged stingray): <i>Telatrygon zugei</i> (Müller & Henle, 1841)		VU	+
Cá đuối bông mõm tù (Stingrays): <i>Neotrygon varidens</i> (Garman, 1885)		LC	
Cá Đuối bông nâu (Brown stingray): <i>Bathytoshia lata</i> (Garman, 1880)		VU	+
Cá đuối bông ngói (Bengal whipray): <i>Brevistrygon imbricata</i> (Bloch & Schneider, 1801)		VU	+
Cá đuối bông thân trơn (Jenkins whipray): <i>Pateobatis jenkinsii</i> (Annandale, 1909)		EN	
Cá đuối bông đuôi ruy băng (Round ribbontail ray): <i>Taeniurops meyeri</i> (Müller & Henle, 1841)		VU	
Cá đuối bông thân tròn (Round whip ray): <i>Maculabatis pastinacoides</i> (Bleeker, 1852)		EN	
Cá đuối bông trung hoa (Chinese stingray): <i>Hemistrygon sinensis</i> (Steindachner, 1892)		EN	
Cá đuối vàng (Cowtail stingray): <i>Pastinachus sephen</i> (Fabricius, 1775)		NT	
<b>Family: Gymnuridae</b>			
Cá đuối bướm hoa (Long-tailed butterfly ray): <i>Gymnura poecilura</i> (Shaw, 1804)	VU	VU	
Cá đuối bướm nhật bản (Japanese butterflyray): <i>Gymnura japonica</i> (Temminck & Schlegel, 1850)	VU	VU	
Cá đuối điều (Zonetail butterfly ray): <i>Gymnura zonura</i> (Bleeker, 1852)		EN	

**Family: Plesiobatidae**

Cá đuối biển sâu (Deep-water stingray): *Plesiobatis daviesi* (Wallace, 1967) LC

**Family: Urolophidae**

Cá đuối gai nâu (Sepia stingray): *Urolophus aurantiacus* Müller & Henle, 1841 VU +

**Family: Aetobatidae**

Cá ó không chằm lớn (Longheaded eagle ray): *Aetobatus flagellum* (Bloch & Schneider, 1801) VU EN +

Cá ó không chằm nhỏ (Naru eagle ray): *Aetobatus narutobiei* White, Furumitsu & Yamaguchi 2013 VU VU +

Cá đuối ó sao (Ocellated eagle ray): *Aetobatus ocellatus* (Kuhl, 1823) VU EN +

**Family: Myliobatidae**

Cá ó chằm trắng (Brown eagle-ray): *Aetomylaeus milvus* (Müller & Henle, 1841) VU EN +

Cá ó đầu bò (Japanese eagle ray): *Myliobatis tobijei* Bleeker, 1854 VU VU +

Cá ó hoa (Mottled eagle ray): *Aetomylaeus maculatus* (Gray, 1834) EN EN +

Cá ó vằn (Ornate eagle ray): *Aetomylaeus vespertilio* (Bleeker, 1852) EN CR

Cá ó vệt xanh, Cá ó không gai (Banded eagle ray): *Aetomylaeus nichofii* (Bloch & Schneider, 1801) VU +

**Family: Rhinopteridae**

Cá ó doi mõm bò (Flapnose ray): *Rhinoptera javanica* Müller & Henle, 1841 EN +

**Family: Mobulidae**

Cá doi sừng dài (Longhorned mobula): *Mobula eregoodoo* (Cantor, 1849) EN EN +

Cá doi đuôi trơn (Smoothtail mobula): *Mobula thurstoni* (Lloyd, 1908) EN +

Cá doi không gai (Devil fish): *Mobula mobular* (Bonnaterre, 1788) EN +

Cá doi nhật bản (Spinetail mobula): *Mobula japanica* (Müller & Henle, 1841) EN +

Cá nạng hải (Giant manta): *Mobula birostris* (Walbaum, 1792) EN EN

**Order: CHIMAERIFORMES****Family: Chimaeridae**

Cá khi-me, cá toàn đầu (Silver chimaera): *Chimaera phantasma* Jordan & Snyder, 1900 VU VU

### 3.3. Discussion

Here, we present one species newly recorded for the first time in Vietnamese waters, along with other species for which specimen vouchers are currently deposited at the Institute of Oceanography. The accompanying images provide clear and specific evidence for these records. *Cephaloscyllium pictum* was described in 2008 from five specimens collected at fish markets in Lombok and Bali, Indonesia (Last et al., 2008). This species is rarely and recorded the first live video on 17 and 18 November 2024 at two sites off Dili, Timor-Leste, at depths of 570 m and 536 m (Claassens et al., 2025)

A large number of cartilaginous fish species has been reported from publications in Vietnamese waters. However, many species have been misidentified, while a few species have been re-identified or newly described with specimens collected in Vietnam such as *Aetobatus narinari* (Euphrasen, 1790) recorded over a long period of time for Vietnam waters, and recently this species confirm distribute in Western Atlantic and one other, *Aetobatus ocellatus* (Kuhl, 1823) resurrected as a valid species and dispose in Indo-Pacific (Berthe et al., 2016, Last et al., 2016). *Aetobatus narutobiei* White, Furumitsu & Yamaguchi 2013 recorded with specimens at Cat Ba Island in Vietnam (White et al., 2013). A Numbfish was announced as a new species previously, *Narcine tonkinensis* Nguyen, 1970, but no specimens were available for verification. There are several species that have not been recorded in the past as Brown numbfish *Narcine brunnea* Annandale, 1909, Pelagic stingray *Pteroplatytrygon violacea* (Bonaparte, 1832), Deep-water stingray *Plesiobatis daviesi* (Wallace, 1967), Whitespotted skate *Okamejei cairae* Last, Fahmi & Ishihara, 2010,... They have only been recorded in a few recent publications (Bui et al., 2018; Nguyen & Nguyen, 2022).

About more than 30 % of species are at risk of extinction in Vietnamese waters as assessed in the Vietnam Red Book 2024. However, many cartilaginous fish species are assessed to have a narrow distribution in the Southeast Asian, of which the East Sea is the place of concentrated distribution. They are classified as critically endangered, needing priority for conservation, such as *Cephaloscyllium sarawakensis*, *Cephaloscyllium fasciatum*, *Squatina tergocellatoides*, *Okamejei boesemani*, *Okamejei hollandi*,... (IUCN, 2024).

### 4. CONCLUSIONS

A checklist of the chondrichthyan fishes (sharks, batoids and chimaeras) of Vietnamese waters examined about 165 species of 46 families and 12 orders; accounting for 13.9 percent of the world's total species. This assessment was revised from published

documents and updated one new record. The results are important data to determine the number of chondrichthyan species in Vietnamese waters with their diversity and contributing to the conservation of highly endangered fish species.

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## CÁ SỤN Ở VÙNG BIỂN VIỆT NAM - CẬP NHẬT DANH MỤC LOÀI

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**Tóm tắt:** Bài báo tổng quan đưa ra danh mục được kiểm tra và cập nhật tất cả các công bố khoa học liên quan đến cá sụn tại vùng biển Việt Nam. Bản cập nhật mới được tiến hành từ nguồn tài liệu từ 1964-2023 và bổ sung loài ghi nhận mới về cá sụn được thu thập trong một vài năm trước. Bản kiểm kê được thực hiện bằng cách sử dụng dữ liệu thu thập các từ khóa bao gồm tên hợp lệ của các loài có liên quan đã xuất bản với các chứng cứ trên vùng biển Việt Nam. Trong danh mục công bố năm 2016, có 174 loài cá sụn được ghi nhận là có mặt ở vùng biển Việt Nam, được sử dụng làm thời điểm và xác nhận phạm vi địa lý phân bố và tên đồng nghĩa. Các loài với mẫu vật được lưu trong bộ sưu tập của bảo tàng được bổ sung vào danh sách. Cho đến nay, kết quả tu chỉnh và xác nhận có tổng cộng là 165 loài cá sụn đã được ghi nhận ở vùng biển Việt Nam; trong đó có 164 loài được công bố và một loài được ghi nhận đầu tiên, *Cephaloscyllium pictum* Last, Séret & White, 2008 cho vùng biển Việt Nam.

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**Từ khóa:** Đa dạng sinh học, cá sụn, cá mang tấm, cá toàn đầu.

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