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COLLECTION OF THE SHARKS OF THE NATIONAL MUSEUM IN PRAGUE - PART 1. COMPLETE TAXIDERMS AND LIQUID PRESERVATIONS

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Abstract. The sharks in the collection of the National Museum in Prague are preserved complete, taxidermied or in liquid, as eggs, sets of jaws, anatomical preparates and skeletons in liquid. In this paper the revision of all taxidermied shark specimens and those preserved in liquid is presented as a catalogue including 255 specimens of 40 shark species. For each specimen, whenever possible, the following main data are presented: species, catalogue number, sex, total length, date and location of the capture, type of preservation. The collection includes the first albinotic shortnose spurdog *Squalus megalops* known to date and some specimens belonging to rare and uncommon species such as frilled shark *Chlamydoselachus anguineus*, little sleeper shark *Somniosus rostratus*, bigeyed sixgill shark *Hexanchus nakamurai*, and pelagic thresher *Alopias pelagicus*. One of the *Hexanchus nakamurai* specimens preserved in the collection represents the second known record of this species from the Mediterranean Sea. The 1170 mm long Japanese bullhead shark *Heterodontus japonicus* displayed in the exhibition is one of the largest specimens of this species ever recorded.

■ **sharks, collection, National Museum in Prague.**

INTRODUCTION

European countries often keep several precious shark specimens in their collections. These are preserved both in large national natural history museums and smaller university museums of zoology and comparative anatomy. Most of these materials are historical pieces, acquired by the museums in the past, mainly during the 19th century and in the first half of the 20th century. Most specimens preserved in these collections have not been studied yet. Sharks are often kept in an inadequate state of preservation and catalogues are sometimes absent or with insufficient data. The species classification is very often incorrect or old. However, since the references about sharks are often scarce, these collections are important as a source of data on sharks, as it was underlined in recent works (Barrull et al. 1999, De Maddalena 2000).

The National Museum in Prague has a rich and interesting collection of shark specimens. A part of this collection has been revised by Adamovič (1988). This author studied and described 65 well-preserved specimens, presenting also their complete morphometric measurements, but he did not include in his work the rest of sharks because of "various deformities or poor preservation". The aim of the present work is to provide a complete and updated list of all sharks in the museum together with their basic data.

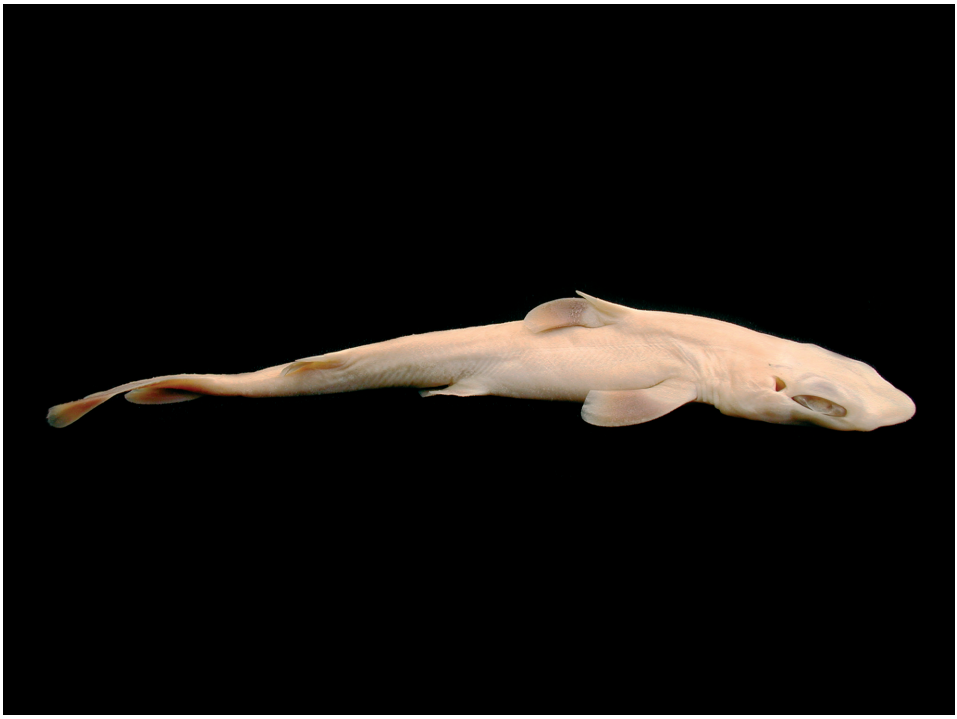

Fig. 1. Albinotic female of shortnose spurdog *Squalus megalops* (NMP6V 80301) 236 mm long.

Fig. 2. Bigeyed sixgill shark *Hexanchus nakamurai* (NMP6V 05218) displayed in the exhibition. It is the second known record of this species from the Mediterranean Sea.

Fig. 3. Newborn angelshark *Squatina squatina* (NMP6V 80343) from Trieste, Italy.

Fig. 4. The japanese bullhead shark *Heterodontus japonicus* (NMP6V 05251) displayed in the exhibition is one of the largest specimens ever recorded.

MATERIAL AND METHODS

A small part of the collection is displayed in the ichthyological section of the exhibition halls in the main museum building. The major part of the material is deposited in the new depository building in Horní Počernice, Prague 9.

For each specimen the data are presented in the following order: species, catalogue number, sex, total length (TOT) in millimetres, location and date of the capture, preservation type.

Species identification and classification was based on Compagno (1984). The total length (TOT) was measured from the tip of the snout to the tip of the upper lobe of the caudal fin, with the caudal fin maximally tighten (Compagno 1984). When only head is preserved, the length in the catalogue is the length from the tip of the snout to the end of the pectoral fins basis. The exception is the head of hammerhead shark, where the width of the head is given instead. A question mark indicates some doubts in identification.

Abbreviations used in the catalogue: M = male, F = female, T = taxidermied, L = liquid.

RESULTS

The shark collection of the National Museum in Prague includes 255 specimens preserved in liquid or taxidermied. They belong to 7 orders, 15 families, 27 genera and 40 species. The majority of the material is represented by completely preserved specimens. The exception is twelve exemplars of which only heads are stored.

Order Hexanchiformes
Family Chlamydoselachidae

Chlamydoselachus anguineus GARMAN, 1884
NMP6V 05082 – F, 1450 mm, Japan, 1896, T – displayed

Family Hexanchidae

Heptranchias perlo (BONNATERRE, 1788)
NMP6V 05219 – F, 1010 mm, Nice, France, Mediterranean Sea, 1898, T – displayed
NMP6V 33749 – F, 820 mm, Nice, France, Mediterranean Sea, Jan. 1902, L
Capture locality unknown:
NMP6V 80198 – F, 1020 mm, L
NMP6V 80205 – F, 700 mm, L
NMP6V 80282 – F, 980 mm, 1895, L
NMP6V 80283 – F, 980 mm, L
NMP6V 80285 – F, 970 mm, L

Hexanchus griseus (BONNATERRE, 1788)
NMP6V 80204 – M, 1100 mm, Nice, France, Mediterranean Sea, Aug. 1904, L
NMP6V 33748 – F, 820 mm, capture locality unknown, L

Hexanchus nakamurai TENG, 1962
NMP6V 05218 – F, 820 mm, Mediterranean Sea, T – displayed
NMP6V 80170 – F, 1200 mm, capture locality unknown, T

Order Squaliformes

Family Echinorhinidae

Echinorhinus brucus (BONNATERRE, 1788)
NMP6V 05253 – M, 1500 mm, Nice, France, Mediterranean Sea, 1898, T – displayed

Family Squalidae

Centrophorus granulosus (BLOCH et SCHNEIDER, 1801)
(?) NMP6V 05220 – M, 830 mm, Nice, France, Mediterranean Sea, 1898, T – displayed
Capture locality unknown:
(?) NMP6V 33753 – M, 870 mm, L
(?) NMP6V 33754 – M, 770 mm, L
(?) NMP6V 80295 – F, 550 mm, L
(?) NMP6V 80296 – M, 680 mm, L
(?) NMP6V 80297 – M, 600 mm, L
(?) NMP6V 80302 – F, 490 mm, L
(?) NMP6V 80303 – F, 540 mm, L
(?) NMP6V 80304 – M, 490 mm, L
(?) NMP6V 80314 – M, 855 mm, L

Centrophorus sp.
NMP6V 80169 – M, 900 mm, capture locality unknown, T

Dalatias licha (BONNATERRE, 1788)
NMP6V 80171 – F, 1020 mm, capture locality unknown, T

Etmopterus spinax (LINNAEUS, 1758)

NMP6V 33750 – F, 390 mm, Nice, France, Mediterranean Sea, 1898, L
NMP6V 33751 – F, 310 mm, Norway, around 1860, L
NMP6V 33752 – M, embryo with yolk sac, 112 mm, Bergen, Norway, North Sea, 1898, L
NMP6V 33760 – M, 360 mm, Bergen, Norway, North Sea, 1898, L

Somniosus rostratus (Risso, 1826)

NMP6V 05228 – F, 920 mm, Nice, France, Mediterranean Sea, 1902, T
NMP6V 80217 – sex uncertain, embryo, 55 mm, Nice, France, Mediterranean Sea, 1898, L
NMP6V 80218 – sex uncertain, embryo, 82 mm, Nice, France, Mediterranean Sea, 1898, L
NMP6V 80219 – sex uncertain, embryo, 81 mm, Nice, France, Mediterranean Sea, 1898, L
NMP6V 80220 – sex uncertain, embryo, 85 mm, Nice, France, Mediterranean Sea, 1898 L
NMP6V 80221 – sex uncertain, embryo, 53 mm, Nice, France, Mediterranean Sea, 1898, L
Capture locality unknown:
NMP6V 80183 – F, 920 mm, T
NMP6V 80305 – F, embryo, 175 mm, L
NMP6V 80306 – M, embryo, 173 mm, L
NMP6V 80307 – M, embryo, 172 mm, L
NMP6V 80308 – M, embryo, 175 mm, L
NMP6V 80309 – M, embryo, 181 mm, L

Squalus acanthias Smith et Radcliffe, 1912

NMP6V 33755 – M, 295 mm, Constanca – Mamaia, Romania, Black Sea, 1959, L
NMP6V 33756 – F, 385 mm, Constanca – Mamaia, Romania, Black Sea, 1959, L
NMP6V 33757 – F, embryo, 235 mm, Constanca – Mamaia, Romania, Black Sea, 1959, L
NMP6V 80216 – M, embryo, 211 mm, Achtopol, Bulgaria, Black Sea, Jul. 1987, L
NMP6V 80223 – F, 450 mm, Varna, Bulgaria, Black Sea, Jul. 1960, L
NMP6V 80298 – F, embryo, 135 mm, Constanca – Mamaia, Romania, Black Sea, 1959, L
NMP6V 80299 – F, embryo, 235 mm, Constanca – Mamaia, Romania, Black Sea, 1959, L
NMP6V 80300 – M, embryo, 185 mm, Constanca – Mamaia, Romania, Black Sea, 1959, L
Capture locality unknown:
NMP6V 05223 – M, 670 mm, 1895, T
NMP6V 80196 – M, 710 mm, L
NMP6V 80197 – M, 750 mm, L
NMP6V 80201 – M, 710 mm, L
NMP6V 80202 – M, 690 mm, L
NMP6V 80230 – F, embryo, 190, mm, L
NMP6V 80231 – F, embryo, 190 mm, L
NMP6V 80232 – F, embryo, 191 mm, L
NMP6V 80233 – F, embryo, 192 mm, L
NMP6V 80234 – F, embryo, 194 mm, L
NMP6V 80235 – F, embryo, 181 mm, L
NMP6V 80236 – F, embryo, 194 mm, L
NMP6V 80237 – F, embryo, 188 mm, L
NMP6V 80238 – F, embryo, 211 mm, L
NMP6V 80239 – M, embryo, 205 mm, L
NMP6V 80240 – M, embryo, 185 mm, L
NMP6V 80241 – M, embryo, 190 mm, L
NMP6V 80242 – M, embryo, 185 mm, L
NMP6V 80243 – M, embryo, 193 mm, L
NMP6V 80244 – M, embryo, 206 mm, L
NMP6V 80245 – M, embryo, 205 mm, L
NMP6V 80246 – M, embryo, 197 mm, L
NMP6V 80247 – M, embryo, 174 mm, L
NMP6V 80248 – M, embryo, 187 mm, L
NMP6V 80249 – M, embryo, 194 mm, L
NMP6V 80250 – M, embryo, 200 mm, L
NMP6V 80251 – M, embryo, 194 mm, L
NMP6V 80252 – M, embryo, 200 mm, L
NMP6V 80253 – M, 680 mm, L
NMP6V 80254 – F, 750 mm, L
NMP6V 80255 – F, 810 mm, L
NMP6V 80271 – M, embryo, 165 mm, 1905, L
NMP6V 80272 – M, embryo, 177 mm, 1905, L
NMP6V 80273 – M, embryo, 175 mm, 1905, L
NMP6V 80274 – M, embryo, 172 mm, 1905, L
NMP6V 80275 – M, embryo, 172 mm, 1905, L
NMP6V 80276 – F, embryo, 166 mm, 1905, L
NMP6V 80277 – F, embryo, 170 mm, 1905, L
NMP6V 80278 – F, embryo, 169 mm, 1905, L
NMP6V 80279 – F, embryo, 170 mm, 1905, L
NMP6V 80284 – F, 600 mm, 1959, L
NMP6V 80340 – M, 680 mm, L
NMP6V 80348 – M, 320 mm, L

Squalus blainvillei (Risso, 1826)

NMP6V 05224 – F, 710 mm, Nice, France, Mediterranean Sea, 1898, T

Squalus megalops (Macleay, 1881)

capture locality unknown:
NMP6V 33758 – M, 450 mm, L
NMP6V 80288 – F, 510 mm, L
NMP6V 80301 – F, albinotic specimen, 236 mm, L
NMP6V 80313 – head, 150 mm, L
NMP6V 80315 – M, 340 mm, Nov. 1903, L
NMP6V 80316 – M, 350 mm, Nov. 1903, L
NMP6V 80317 – M, 305 mm, Nov. 1903, L
NMP6V 80318 – F, 300 mm, Nov. 1903, L
NMP6V 80319 – F, 345 mm, Nov. 1903, L
NMP6V 80329 – M, 500 mm, L
NMP6V 80330 – M, 485 mm, L

NMP6V 80331 – M, 490 mm, L
NMP6V 80332 – M, 500 mm, L
NMP6V 80333 – M, 470 mm, L
NMP6V 80334 – M, 340 mm, L
NMP6V 80335 – M, 310 mm, L
NMP6V 80336 – M, 305 mm, L
NMP6V 80337 – F, 580 mm, L
NMP6V 80338 – F, 530 mm, L
NMP6V 80339 – F, 580 mm, L

Family Oxynotidae

Oxynotus centrina (LINNAEUS, 1758)
NMP6V 05227 – F, 560 mm, Mediterranean Sea, T – displayed
Capture locality unknown:
NMP6V 33759 – F, 450 mm, L
NMP6V 80203 – F, 550 mm, Dec. 1908, L

Order Squatiniformes

Family Squatinidae

Squatina aculeata DUMERIL, 1829
NMP6V 80289 – F, embryo, 78 mm, Nice, France, Mediterranean Sea, 1902, L
NMP6V 80290 – F, embryo, 78 mm, Nice, France, Mediterranean Sea, 1902, L
NMP6V 80291 – F, embryo, 125 mm, Nice, France, Mediterranean Sea, 1902, L
NMP6V 80292 – M, embryo, 120 mm, Nice, France, Mediterranean Sea, 1902, L
NMP6V 80344 – M, embryo, 190 mm, capture locality unknown, L
Squatina japonica *BLEEKER, 1858*
NMP6V 80347 – F, 280 mm, Japan, 1896, L
Squatina squatina (LINNAEUS, 1758)
NMP6V 05229 – F, 750 mm, Mediterranean Sea, T – displayed
NMP6V 80343 – M, 237 mm, Trieste, Italy, Adriatic Sea, around 1860, L

Order Heterodontiformes

Family Heterodontidae

Heterodontus japonicus (MACLAY et MACLEAY, 1884)
NMP6V 33761 – M, 700 mm, Sagami Bay, Japan, Sagami Sea, May 1909, L
NMP6V 33762 – M, 700 mm, Sagami Bay, Japan, Sagami Sea, May 1909, L
Capture locality unknown:
NMP6V 05251 – F, 1170 mm, T – displayed
NMP6V 33763 – M, 295 mm, L
NMP6V 33764 – M, 252 mm, L
NMP6V 33765 – M, 243 mm, L
NMP6V 33766 – F, 240 mm, L
NMP6V 33767 – M, 223 mm, L
NMP6V 33768 – F, 231 mm, L
NMP6V 33769 – F, 215 mm, L
NMP6V 80206 – M, 800 mm, Jan. 1903, L
NMP6V 80207 – M, 242 mm, L
NMP6V 80208 – M, 234 mm, L
NMP6V 80209 – M 313 mm, L

Order Orectolobiformes

Family Hemiscyllidae

Chiloscyllium plagiosum (BENNETT, 1830)
NMP6V 33770 – M, 520 mm, Borneo, 1897, L
Chiloscyllium punctatum MÜLLER et HENLE, 1838
NMP6V 33771 – F, 460 mm, Borneo, L

Family Ginlymostomatidae

Ginglymostoma cirratum (BONNATERRE, 1788)
NMP6V 80182 – F, 1000 mm, capture locality unknown, T

Order Lamniformes

Family Alopiidae

Alopias pelagicus NAKAMURA, 1935
NMP6V 06271 – M, 1400 mm, capture locality unknown, T – displayed

Family Lamnidae

Isurus oxyrinchus (RAFINESQUE, 1809)
NMP6V 05225 – F, 950 mm, Nice, France, Mediterranean Sea, 1902, T – displayed
NMP6V 80194 – M, 780 mm, capture locality unknown, 1902, L

Order Carcharhiniformes

Family Scyliorhinidae

Atelomycterus marmoratus (BENNETT, 1830)
NMP6V 33772 – M, 435 mm, Sulawesi, Makasar, 1959, L
NMP6V 33773 – M, 540 mm, Borneo, L
NMP6V 33774 – M, 490 mm, Borneo, L
Galeus melastomus RAFINESQUE, 1810
NMP6V 33775 – M, 320 mm, Napoli, Italy, Mediterranean Sea, 1901, L
NMP6V 33776 – M, 480 mm, Nice, France, Mediterranean Sea, 1898, L
NMP6V 33777 – M, 333 mm, capture locality unknown, L
Schroederichthys chilensis (GUICHENOT, 1848)
NMP6V 80 181 – F, 510 mm, Chile, L

Scyliorhinus canicula (LINNAEUS, 1758)
Capture locality unknown:
NMP6V 33778 – F, 397 mm, L
NMP6V 33779 – F, 415 mm, L
NMP6V 33780 – M, 390 mm, L
NMP6V 33781 – F, 385 mm, L
NMP6V 33782 – M, 382 mm, L
NMP6V 33783 – F, 375 mm, L
NMP6V 33784 – F, 375 mm, L
NMP6V 33785 – M, 371 mm, L
NMP6V 33786 – F, 360 mm, L
NMP6V 33787 – F, 360 mm, L
NMP6V 33788 – M, 355 mm, L
NMP6V 33789 – F, 341 mm, L
NMP6V 33790 – M, 341 mm, L
NMP6V 33791 – F, 334 mm, L
NMP6V 33792 – M, 325 mm, L
NMP6V 80256 – F, 370 mm, L
NMP6V 80257 – M, 360 mm, L
NMP6V 80258 – F, 305 mm, 1914, L
NMP6V 80259 – M, 435 mm, L
NMP6V 80260 – F, 360 mm, 1914, L
NMP6V 80261 – F, 400 mm, 1914, L
NMP6V 80262 – M, 430 mm, L
NMP6V 80263 – M, 440 mm, L
NMP6V 80264 – F, 385 mm, 1914, L
NMP6V 80265 – M, 430 mm, L
NMP6V 80266 – F, 410 mm, L
NMP6V 80267 – M, 370 mm, 1914, L
NMP6V 80268 – F, 425 mm, L
NMP6V 80269 – F, 405 mm, L
NMP6V 80270 – F, 385 mm, L
Scyliorhinus stellaris (LINNAEUS, 1758)
NMP6V 05217 – M, 710 mm, Mediterranean Sea, 1896, T – displayed
NMP6V 33793 – M, 472 mm, Yugoslavia, Adriatic Sea, 1965, L
NMP6V 80016 – F, 680 mm, Mediterranean Sea, 1996, L
NMP6V 80195 – F, embryo, 155 mm, Nice, France, Mediterranean Sea, 1899, L
Capture locality unknown:
NMP6V 80173 – head, 160 mm, L
NMP6V 80174 – head, 200 mm, L
NMP6V 80175 – head, 185 mm, L
NMP6V 80176 – head, 165 mm, L
NMP6V 80177 – head, 210 mm, L
NMP6V 80178 – head, 180 mm, L
NMP6V 80179 – head, 180 mm, L
NMP6V 80180 – head, 160 mm, L
NMP6V 80184 – F, 830 mm, 1901, L
NMP6V 80185 – F, 450 mm, 1901, L
NMP6V 80186 – F, 400mm, 1901, L
NMP6V 80187 – M, 335 mm, 1901, L
NMP6V 80188 – M, 355 mm, 1901, L
NMP6V 80189 – M, 320 mm, 1901, L
NMP6V 80190 – M, 240 mm, 1901, L
NMP6V 80222 – M, embryo, 160 mm, L

Family Triakidae

Galeorhinus galeus (LINNAEUS, 1758)
Capture locality unknown:
NMP6V 80214 – M, 810 mm, L
NMP6V 80215 – M, 600 mm, L
Mustelus asterias CLOQUET, 1821
Capture locality unknown:
NMP6V 33794 – M, 420 mm, L
NMP6V 33795 – F, 415 mm, L
NMP6V 80286 – F, 252 mm, L
NMP6V 80287 – F, 269 mm, L
NMP6V 80312 – head, 150 mm, L
NMP6V 80320 – M, 410 mm, Nov. 1903, L
NMP6V 80321 – M, 430 mm, Nov. 1903, L
NMP6V 80322 – M, 415 mm, Nov. 1903, L
NMP6V 80323 – M, 400 mm, Nov. 1903, L
NMP6V 80324 – M, 430 mm, Nov. 1903, L
NMP6V 80325 – M, 420 mm, Nov. 1903, L
NMP6V 80326 – F, 410 mm, Nov. 1903, L
NMP6V 80327 – F, 420 mm, Nov. 1903, L
Mustelus mustelus (LINNAEUS, 1758)
NMP6V 80293 – M, embryo, 333 mm, Nice, France, Mediterranean Sea, 1902, L
NMP6V 80294 – F, embryo, 342 mm, Nice, France, Mediterranean Sea, 1902, L
NMP6V 80310 – M, 420 mm, Lesina, Italy, Mediterranean Sea, 1856, L
NMP6V 80341 – F, 770 mm, capture locality unknown, around 1890, L
Mustelus sp.
NMP6V 05226 – F, 870 mm, Nice, France, Mediterranean Sea, 1898, T

Family: Carcharhinidae

Carcharhinus falciformis (BIBRON, 1839)
NMP6V 80168 – F, 500 mm, capture locality unknown, T
Carcharhinus brachyurus (GÜNTHER, 1870)
(?) NMP6V 80193 – M, embryo, 450 mm, capture locality unknown, L
Carcharhinus dussumieri (VALENCIENNES, 1839)
(?) NMP6V 80199 – F, 620 mm, capture locality unknown, L
Carcharhinus melanopterus (QUOY et GAIMARD, 1854)
MNP6V 80060 – F, 850 mm, Bali, Indonesia, 1999, L

Prionace glauca (LINNAEUS, 1758)
NMP6V 33798 – M, 520 mm, Nice, France, Mediterranean Sea, Aug. 1904, L
NMP6V 33800 – M, 670 mm, Nice, France, Mediterranean Sea, Aug. 1904, L
NMP6V 80227 – F, 650 mm, Nice, France, Mediterranean Sea, Nov. 1897, L
NMP6V 80228 – F, 740 mm, Nice, France, Mediterranean Sea, Nov. 1875, L
Capture locality unknown:
NMP6V 33799 – F, 750 mm, L
NMP6V 33801 – M, 560 mm, L
NMP6V 80192 – M, 680 mm, L
NMP6V 80200 – M, 510 mm, Jan. 1902, L
NMP6V 80224 – F, 640 mm, L
NMP6V 80225 – M, 790 mm, L
NMP6V 80226 – M, 600 mm,L
NMP6V 80229 – F, 800 mm, L
NMP6V 80280 – F, 470 mm, L
NMP6V 80281 – M, 590 mm, L
NMP6V 80328 – F, 600 mm, L
Scoliodon laticaudus MÜLLER et HENLE, 1838
Capture locality unknown:
NMP6V 33796 – F, 370 mm, L
NMP6V 33797 – F, 350 mm, L

Family Sphyrnidae
Eusphyra blochii (CUVIER, 1817)
Capture locality unknown:
NMP6V 80210 – M, 410 mm, L
NMP6V 80211 – M, 410 mm, L
NMP6V 80212 – M, 400 mm, L
NMP6V 80213 – F, 400 mm, L
NMP6V 80342 – M, 410 mm, T
NMP6V 80343 – F, 420 mm, T
Sphyrna mokarran (RÜPPELL, 1837)
NMP6V 05269 – head, 900 mm, capture locality unknown, around 1880, T
Sphyrna lewini (GRIFFITH et SMITH, 1834)
NMP6V 80191 – F, 550 mm, capture locality unknown, L
Sphyrna zygaena (LINNAEUS, 1758)
NMP6V 05216 – F, 600 mm, New York, USA, 1892, T
NMP6V 33802 – F, 770 mm, Nice, France, Mediterranean Sea, Aug. 1904, L
NMP6V 33803 – M, 700 mm, Mediterranean Sea, Aug. 1904, L
Capture locality unknown:
NMP6V 80172 – F, 470 mm, around 1860, L
NMP6V 80311 – head, 360 mm, L

DISCUSSION

In the previous revision by Adamovič (1988) there are some mistakes in species identification. NMP6V 33794, starry smooth-hound *Mustelus asterias*, was identified as smooth-hound *Mustelus mustelus*. It is difficult to distinguish these two species when a starry smooth-hound specimen lacks white spots. However, NMP6V 33794 has a well evident white-spotted coloration on its back. Seven specimens of japanese bullhead shark *Heterodontus japonicus* (NMP6V 33763 - NMP6V 33769) were wrongly identified as zebra bullhead shark *Heterodontus zebra* (GRAY, 1831). The two species are easier to distinguish when fresh. They become much more similar after a long preservation in liquid, as the coloration loses its original brightness and fades. *H. japonicus* has 12-13 dark vertical bands on a light background. Similar bands are present also in *H. zebra* but they are conspicuously darker or black, narrower, more numerous (20-21) and the background is lighter or white. Moreover, dorsal fins are much longer in *H. zebra* than in *H. japonicus* (this characteristic is not correctly illustrated in Compagno (1984), where dorsal fins of *H. zebra* seem shorter than those of *H. japonicus*).

The collection includes 236 mm long albinotictic female of shortnose spurdog *Squalus megalops* (NMP6V 80301) (Fig. 1). Albinism in sharks is a rare but already known phenomenon. To date, albinism is known to occur in the following species: broadnose sevengill shark *Notorynchus cepedianus* (PERON, 1807), birdbeak dogfish *Deania calcea* (LOWE, 1839), zebra shark *Stegostoma fasciatum* (HERMANN, 1783), basking shark *Cetorhinus maximus* (GUNNERUS, 1765), great white shark *Carcharodon carcharias* (LINNAEUS, 1758), tope shark *Galeorhinus galeus*, grey smooth-hound *Mustelus californicus*

GILL, 1864, leopard shark *Triakis semifasciata* GIRARD, 1854, scalloped hammerhead *Sphyrna lewini* and great hammerhead *Sphyrna mokarran* (Nakaya 1973, Talent 1973, Ellis 1983, Smale et Heemstra 1997, J. Abernethy - personal communication). To our knowledge, the albinotic shortnose spurdog preserved in the National Museum in Prague is the first reported in literature.

The collection contains also some specimens belonging to rare species, such as frilled shark *Chlamydoselachus anguineus* (NMP6V 05082) and little sleeper shark *Somniosus rostratus* (NMP6V 05228, NMP6V 80183, NMP6V 80217-80221 and NMP6V 80305-80309), as well as other specimens of uncommon species, like bigeyed sixgill shark *Hexanchus nakamurai* (NMP6V 05218 and NMP6V 80170) and the pelagic thresher *Alopias pelagicus* (NMP6V 06271).

The bigeyed sixgill shark *Hexanchus nakamurai* (NMP6V 05218) (Fig. 2) displayed in the exhibition is the second known record of this species from the Mediterranean Sea. The first record of *H. nakamurai* from the Mediterranean Sea was mentioned in Tortonese (1985): this author described a 980 mm long female caught in unknown locality of the Mediterranean Sea. This specimen is still preserved in the Museum of Zoology „La Specola" in Florence, Italy, with the catalogue number 6028 (Vanni 1992). No other specimens of *H. nakamurai* were recorded from this area, consequently the 820 mm female from the National Museum in Prague is just the second specimen of *H. nakamurai* recorded from the Mediterranean Sea. Unfortunately the exact capture location is not indicated.

A large part of the collection consists of embryos or newborn specimens (Fig. 3.).

The japanese bullhead shark *Heterodontus japonicus* displayed in the National Museum (NMP6V 05251) (Fig. 4) is one of the largest specimens ever recorded. The size of the female (1170 mm) is just slightly lower than the maximum size for this species (around 1200 mm) reported by Compagno (1984). The size of the NMP6V 05251 specimen was quoted to be 1200 mm in the original documentation. It is very probable that this was the real size and that it was slightly deformed by preparation.

It was impossible to find any data about the origin of 77 % of the specimens in the collection. However, major part of the collection is old, collected during the second half of 19th century and in the beginning of 20th century. Large part of the shark collection, altogether 104 specimens, was donated to the Museum by Jaromír Frič in 1958. He was the heir of Václav Frič, who owned a firm specialised on trade with variety of natural products (Štěpánek 1975). The specimens from this donation were also collected mostly at the turn of 20th century.

Majority of the sharks with known capture locality was caught in Mediterranean Sea, particularly in Nice, France. Nevertheless, some specimens came from Japan, Borneo, Chile or USA. It is difficult to estimate where the undated material came from. However, considering the history of the Czech Republic and the fact that many of the specimens, whose capture location is known, are from the Mediterranean, we can suppose that many of the sharks preserved here were caught in the Mediterranean Sea.

Most shark populations decreased significantly in the Mediterranean Sea. Surely, exploitation of some of these species has contributed to this decline. Probably a more important factor may be the reduction of food resources caused by overexploitation by fisheries. Another important factor could be the antropogenic pollution. In the present time, many shark species are rare or occur sporadically in the Mediterranean Sea. Therefore, the shark collection of the National Museum in Prague has even a historical value.

Most specimens in the collection of the National Museum in Prague are well preserved. This is due to the lack of very large complete specimens, which are usually more subject to deformities and are often poorly prepared, especially when old. This material represents a precious instrument for researchers studying sharks worldwide. Therefore the collection will be of noticeable importance for future studies.

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