

# SHARKS, SKATES & RAYS

of the southern North Sea and the (eastern) English Channel

**START**

- Body strongly flattened? YES → 3 Angelshark (185 cm) (Squatina squatina) **T**
- Body strongly flattened? NO → Gill slits nearly encircle the head? YES → 1 Basking shark (980 cm) (Cetorhinus maximus) **T**
- Gill slits nearly encircle the head? NO → Sickle shaped tail fin? YES → 2 Porbeagle (350 cm) (Lamna nasus) **T**
- Sickle shaped tail fin? NO → Body with many brown "leopard" spots? YES → 5 Nursehound (170 cm) (Scyliorhinus stellaris)
- Body with many brown "leopard" spots? NO → Frontside 2nd dorsal fin above middle anal fin? YES → 6 Lesser spotted dogfish (100 cm) (Scyliorhinus canicula)
- Frontside 2nd dorsal fin above middle anal fin? NO → No anal fin, spines on the 1st and 2nd dorsal fin? YES → 7 Spurdog; spiny dogfish (160 cm) (Squalus acanthias) **T**
- No anal fin, spines on the 1st and 2nd dorsal fin? NO → Anal fin much smaller than 2nd dorsal fin? YES → 8 Starry smooth-hound (140 cm) (Mustelus asterias)
- Anal fin much smaller than 2nd dorsal fin? NO → Light spots on dark skin, dorsally fully covered with spines? YES → 4 Thresher shark (760 cm) (Alopias vulpinus) **T**
- Light spots on dark skin, dorsally fully covered with spines? NO → Light skin and clear dark round spots? YES → 14 Starry ray (105 cm) (Amblyraja radiata) **T**
- Light skin and clear dark round spots? NO → Clear round spots up to the edge of the fin? YES → 17 Spotted ray (80 cm) (Raja montagui) **R**
- Clear round spots up to the edge of the fin? NO → Dark undulating bands and light-coloured spots? YES → 15 Cuckoo ray (75 cm) (Leucoraja naevus) **R**
- Dark undulating bands and light-coloured spots? NO → Light spots on dark skin, dorsally fully covered with spines? YES → 13 Thornback ray (140 cm) (Raja clavata) **R**
- Light spots on dark skin, dorsally fully covered with spines? NO → Dorsally with 2 dark 'eye' spots on it's wings? YES → 10 Stingray (140 cm) (Dasyatis pastinaca)
- Dorsally with 2 dark 'eye' spots on it's wings? NO → Straight line drawn from nose to tip of wing intersects body? YES → 12 White skate (230 cm) (Rostroraja alba) **T**
- Straight line drawn from nose to tip of wing intersects body? NO → Ventrally white coloured without black pores? YES → 11 Skate (285 cm) (Dipturus batis - complex) **T**
- Ventrally white coloured without black pores? NO → Ventrally white coloured without black pores? YES → 16 Undulate ray (100 cm) (Raja undulata) **T**
- Ventrally white coloured without black pores? NO → Ventrally white coloured without black pores? YES → 18 Blonde ray (125 cm) (Raja brachyura) **R**

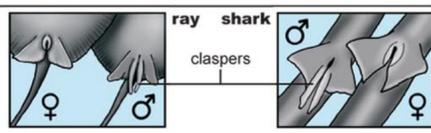
**R** Obligation to report  
**T** Obligation to release



Lmax = The maximum length of the shark, skate or ray, in centimetres.  
D = The depth where the species is mostly found, in meters.  
Source: www.fishbase.org, version (08/2015)

SHARKS features and particularities	
1	<b>T</b> Basking shark ( <i>Cetorhinus maximus</i> ). Lmax = 980 cm. D = 0-2000 m. The basking shark has gill slits which nearly encircle the head. It has very small teeth but uses gill rakers to filter the seawater for plankton. Eyes tiny relative to body size. The basking shark occurs everywhere in the world. Rare in the English Channel and the North Sea.
2	<b>T</b> Porbeagle ( <i>Lamna nasus</i> ). Lmax = 350 cm. D = 0-1000 m. The porbeagle is a heavily built but streamlined shark with a sickle shaped tail. Moderately long conical snout with relatively large black eyes. Dorsally dark blue to grey with no patterning and ventrally white. The porbeagle occurs in the entire North Sea but sporadic.
3	<b>T</b> Angelshark ( <i>Squatina squatina</i> ). Lmax = 185 cm. D = 0-150 m. The angelshark is dorsoventrally flattened with large pectoral and pelvic fins and two large dorsal fins on the tail. Symmetrical light lines on the body. Very rare in the North Sea.
4	<b>T</b> Thresher shark ( <i>Alopias vulpinus</i> ). Lmax = 760 cm. D = 0-500 m. Extreme long dorsal caudal lobe, about as long as rest of shark. Over 29 rows of small teeth in each jaw. Rare in the southern North Sea.
5	<b>T</b> Nursehound ( <i>Scyliorhinus stellaris</i> ). Lmax = 170 cm. D = 5-50 m. Dorsally creamy brown with numerous dark spots, occasionally also white spots. The small anterior nasal flaps do not reach the mouth. Second dorsal fin originates over anal fin. Lives in relative shallow seas such as the North Sea.
6	<b>T</b> Lesser spotted dogfish ( <i>Scyliorhinus canicula</i> ). Lmax = 100 cm. D = 0-100 m. Small and slender shark, dorsally pale brown with patterns of numerous dark spots. Second dorsal fin behind anal fin. Nasal furrows do reach the mouth. 8-9 sometimes poorly visible broader vertical stripes (saddles). Occurs in the North Sea and along the North-East Atlantic coasts.
7	<b>T</b> Spurdog; spiny dogfish ( <i>Squalus acanthias</i> ). Lmax = 160 cm. D = 0-1500 m. Watch out: The spurdog has two dorsal fins with large, sharp spines. No anal fin. Female spurdogs gather in schools which makes a catch of multiple animals quite possible. Occurs in the North Sea and along the North-East Atlantic coasts.
8	<b>T</b> Starry smooth-hound ( <i>Mustelus asterias</i> ). Lmax = 140 cm. D = 100 m. Large, generally white spotted smooth-hound is most of the time easily identifiable, however these spots can be faded or completely absent. The starry smooth-hound prefers mud, sand and gravel bottoms and occurs in the North Sea, Mediterranean Sea and along the North-East Atlantic coasts.
9	<b>T</b> Tope ( <i>Galeorhinus galeus</i> ). Lmax = 200 cm. D = 0-1100 m. Tope have elongated pectoral fins (sea swords) and a pointed snout. Second dorsal fin is as large as the anal fin. They have a rough skin. Occurs in the North Sea and North Atlantic coasts. Tope landings are restricted on the English side of the channel.
SKATES and RAYS features and particularities	
10	<b>T</b> Stingray ( <i>Dasyatis pastinaca</i> ). Lmax = 140 cm. D = 5-200 m. Watch out for the flexible tail of the stingray, it contains a venomous spine. It is the only ray in the North Sea without dorsal fins. The whip-like tail is 1.5 times the length of the body. Occurs mostly along the shore on sandy bottoms. Catches are known at the Oosterschelde.
11	<b>T</b> Skate ( <i>Dipturus batis - complex</i> ). Lmax = 285 cm. D = 100-200 m. The skate has a long pointed snout and a variable pattern of light spots and dark blotches. The skate is a bottom dweller, active both day and night. Nowadays two species of skate are recognized: <i>Dipturus flos sada</i> and <i>Dipturus intermedius</i> , however they are difficult to tell apart in build. Juveniles have large orbital thorns. Occurs in the North Sea, Mediterranean Sea and along the North-East Atlantic coasts.
12	<b>T</b> White skate ( <i>Rostroraja alba</i> ). Lmax = 230 cm. D = 50-500 m. Dorsal surface varies from pale grey to grey blue in adults, red brown in juveniles. Ventral surface is white without black pores. Tail slightly shorter than body. Occurs in the North Sea and along the North-East Atlantic coasts.
13	<b>R</b> Thornback ray ( <i>Raja clavata</i> ). Lmax = 140 cm. D = 10-30 m; autumn/winter D = < 10 m. The thornback ray shows an incredibly large variation in colouring making identification of the species potentially challenging. It varies from light brown to grey with darker blotches and numerous yellow patches. Row of 30-50 thorns along midline to first dorsal fin. The tail is long and solid with rows of thorns running longitudinally. Mostly gets caught in coastal waters with sandy and mud-like bottoms in the North Sea.
14	<b>T</b> Starry ray ( <i>Amblyraja radiata</i> ). Lmax = 105 cm. D = 50-100 m. Thorns have star shaped bases (therefore its name). The starry ray has a short, blunt snout and rounded pectoral fin tips. Starry rays occur mostly north of the Dogger bank, but also in other places in the North Sea.
15	<b>R</b> Cuckoo ray ( <i>Leucoraja naevus</i> ). Lmax = 75 cm. D = 20-250 m. The cuckoo ray is easily identified by the black eye-spot that is present on each pectoral fin. These are large and marbled with yellow stripes making them extremely distinctive. Four rows of thorns on tail, inner two continue onto back. Occurs in the entire North Sea.
16	<b>T</b> Undulate ray ( <i>Raja undulata</i> ). Lmax = 100 cm. D = 50-200 m. Pattern of dark undulating bands lined with two rows of white spots. Ventral surface white with dark margins. The undulate ray is rare in the Canal and the southern part of the North Sea. Mostly occurs in the Mediterranean Sea.
17	<b>R</b> Spotted ray ( <i>Raja montagui</i> ). Lmax = 80 cm. D = 20-500 m. Dorsal surface yellow to pale brown. Many dark spots which do not extend to edge of pectoral fins. Row of 20-50 thorns along midline to first dorsal fin and often simple eye-spot on each pectoral fin. Two dorsal fins of the same size on the tail. Occurs in coastal waters of the North Sea and the Atlantic Ocean.
18	<b>R</b> Blonde ray ( <i>Raja brachyura</i> ). Lmax = 125 cm. D = 10-400 m. Dorsal surface is ochreous to light brown. Covered in small, dark spots which extend to the very edge of the pectoral fins. Larger, lighter spots are often present. Median row of 31-45 thorns. Occurs in the North Sea and the Mediterranean sea on rocky and sandy bottoms.

Colophon  
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# SHARKS, SKATES and RAYS

of the southern North Sea and the (eastern) English Channel

**Why this identification card?**  
This identification card was made for fishermen, to use on board and on the fish market, and of course for everybody who is interested in sharks, skates and rays. When you catch or see a shark, skate or ray, you can use this identification card as an aid to identify the species. You can use the features and particularities to compare or run through the pictures and the short questions at the front of this card to identify the right species.

**Rules**  
Some sharks, skates and rays are protected and it is not allowed to bring them to shore, other species can be brought to land, but under several conditions. The relevant law and regulations are complex, but in general this applies:

- T** For all the species designated with 'T': don't bring to shore! These fish have to be released alive and unharmed as soon as possible. All the details, including the condition of the fish when it is released have to be noted in the electronic log.
- R** For all the species designated with 'R': allowed to bring to shore, but conditional of the applying TAC's (Total Allowable Catch) and quota for these species, and with obligated registration on species level when bringing to shore.
- For the remaining species (not designated with a T or R on the card): allowed to bring to shore, but conditional of the applying TAC's and quota for these species.
- To release all the non-commercial species alive and unharmed is recommended.

**Catches of rare and/or tagged fishes**  
IMARES is interested in reports of all the special catches, i.e. species which do not occur in regular catches. For sharks, skates and rays, those species are identified with a 'T' and species which are not on the card but still occur sporadically (such as species of deeper waters). It is asked to note the following: the date, coordinates of the location of the catch, type of fishing gear, depth, pictures, and the (estimated) length and weight. Reports of tagged fish can also be sent to IMARES. If a fish carries a tag, then please also write down the number of the tag and make pictures of the fish and the tag. **If possible put tagged fish back alive. If it isn't, keep the fish in the freezer and ask if the researcher has any interest for the fish.**

You can pass catches of rare and tagged fish down to IMARES via the mail address: [waarneming.imares@wur.nl](mailto:waarneming.imares@wur.nl) and to Sportvisserij Nederland via the catch form on [www.sharkray.eu](http://www.sharkray.eu).

**How to release?**  
Treat these fish with care and respect. **Do NOT lift sharks, skates and rays from the tail.** Their spine can be damaged pretty badly which can be lethal for the fish. The chance of survival after release is also dependent of the handling on board.

**Please note!**  
Many sharks, skates and rays have strong jaws and a rough skin, some species have thorns and spines. Even so, the sharks, skates and rays of the southern North Sea and the (eastern) English Channel are – if correctly handled – not dangerous to humans.

**More information**  
More information about correct handling and biological knowledge about sharks, skates and rays (including detailed and illustrative factsheets of every species) can be found on the following websites:

- CVO: [www.cvo-visserij.nl](http://www.cvo-visserij.nl)
- Dutch Shark Society: [www.dutchsharksociety.org](http://www.dutchsharksociety.org)
- Sportvisserij Nederland: [www.sharkray.eu](http://www.sharkray.eu)

