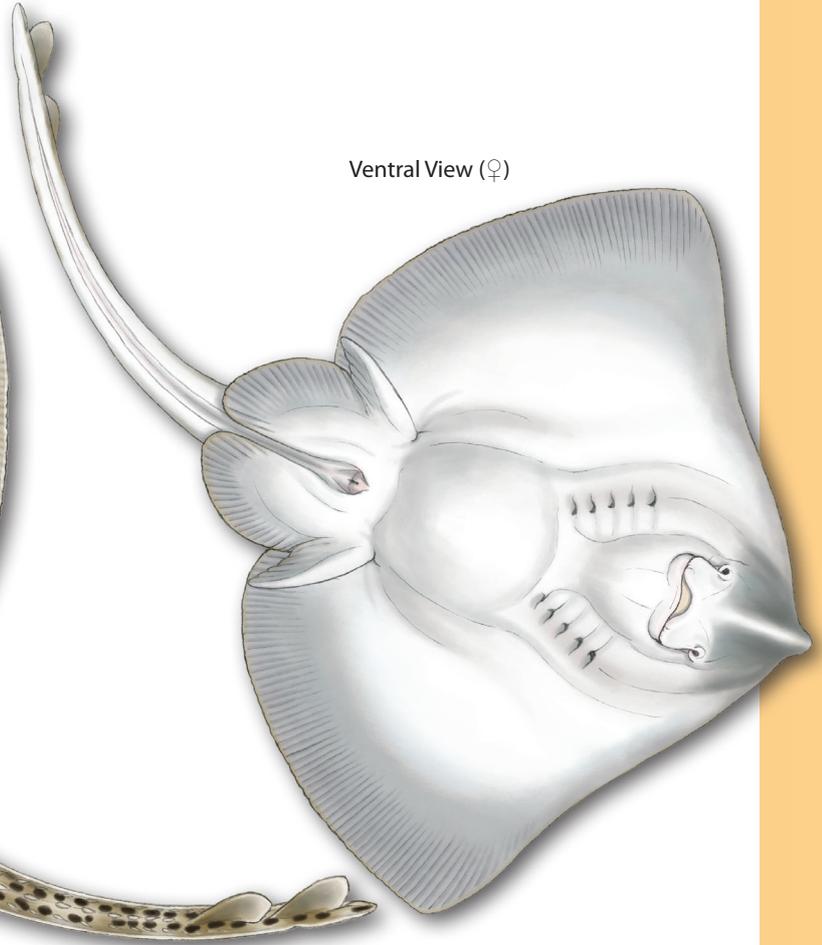


Dorsal View (♀)



Ventral View (♀)



## COMMON NAMES

**Spotted Ray**, Spotted Skate, Homelyn Ray, Spotted Homelyn Ray, Roker, Gefleckte Roche (De), Raie Douce (Fr), Razza Maculata (It), Raia Manchata (Pr), Raya Pintada (Es), Gevlekte Rog (Ne).

## SYNONYMS

*Raja maculata* (Montagu, 1818), *Raja asterias* (non Delaroché) (Müller & Henle, 1841), *Raja maculata* (Günther, 1870), *Raja punctata* (non Risso) (Le Danois, 1913), *Betaraia maculata* (Leigh-Sharpe, 1924).

## DISTRIBUTION



The Spotted Ray is widely distributed through the northeast Atlantic from northern Morocco to the western Baltic and the Shetland Isles, including the Mediterranean Sea (Ellis *et al.*, 2007). It is widespread around most coasts of Britain and Ireland but appears to be rare off the east coast (Picton and Morrow, 2005).

## APPEARANCE

- Maximum total length 80cm.
- Upper surface yellow to pale brown.
- Many dark spots which **do not** extend to edge of pectoral fins.
- Often primitive eye-spot on each pectoral fin.
- Lower surface white.
- Row of 20–50 thorns along midline to first dorsal fin.

The Spotted Ray has a diamond shaped body with broad pectoral fins, the corners of which almost form right angles (Whitehead *et al.*, 1986). Along the leading edge of the disc, females have a gently undulating shape. In males, this undulation is more pronounced (Stehmann and Bürkel, 2000). Young animals have small spines along the leading edge of the disc which extend to just behind the eyes. The orbital thorns are separate (Whitehead *et al.*, 1986). The rest of the disc is free of spines except for a central row of 20-50 thorns to the first dorsal fin (Luna, 2009). Juveniles also have rows of spines along the sides of the tail (Picton and Morrow, 2005). Pairs of irregular thorns may develop on the tail with age and there are 1–2 thorns between the dorsal fins (Stehmann and Bürkel, 2000).

The dorsal surface of the disc varies in colour from yellow to pale brown with numerous small dark spots which give the ray its name. The dark spots **do not** reach the very edge of the pectoral fins leaving a clear margin. This is the feature which most clearly distinguishes the Spotted Ray from the Blonde Ray, *Raja brachyura*. On each pectoral fin these dark spots often concentrate to create a primitive eyespot. The ventral surface of the disc is white (Whitehead *et al.*, 1986).

The maximum reported size of a Spotted Ray is 80cm total length and 50cm disc width but they generally do not grow larger than 60cm total length (Stehmann and Bürkel, 2000; Ellis *et al.*, 2007).

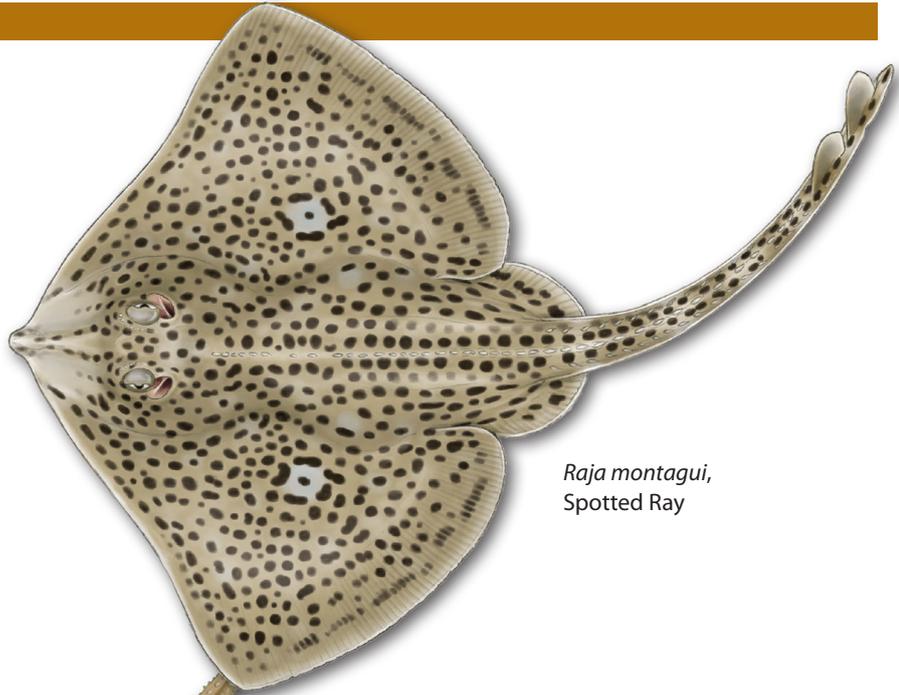
## SIMILAR SPECIES

*Leucoraja naevus*, Cuckoo Ray

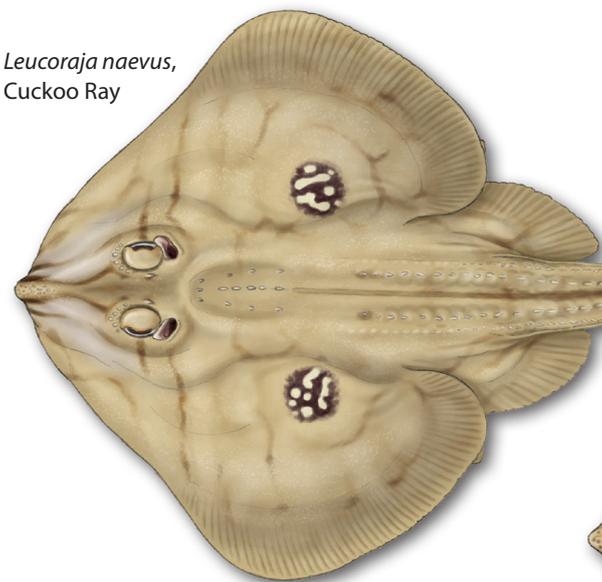
*Raja brachyura*, Blonde Ray

*Raja microocellata*, Small-eyed Ray

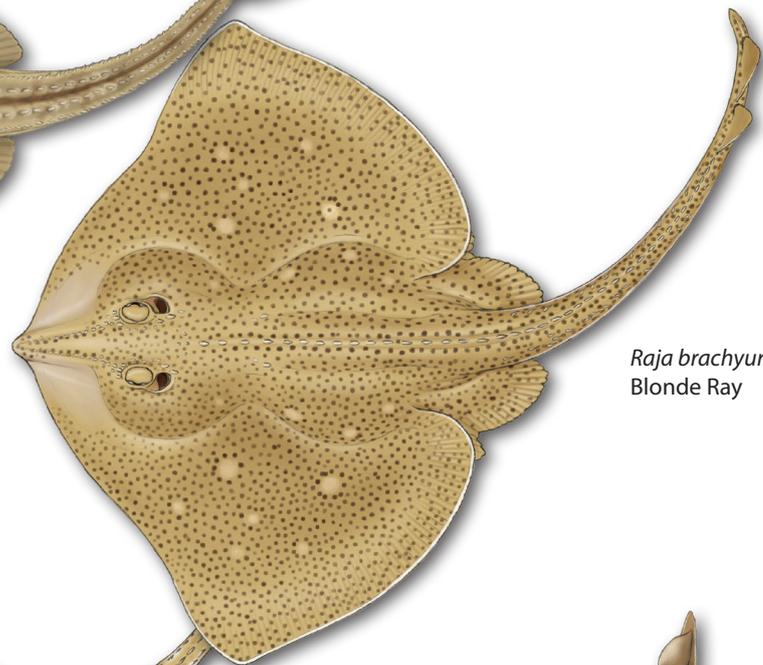
*Raja undulata*, Undulate Ray



*Raja montagui*,  
Spotted Ray



*Leucoraja naevus*,  
Cuckoo Ray



*Raja brachyura*,  
Blonde Ray



*Raja microocellata*,  
Small-eyed Ray

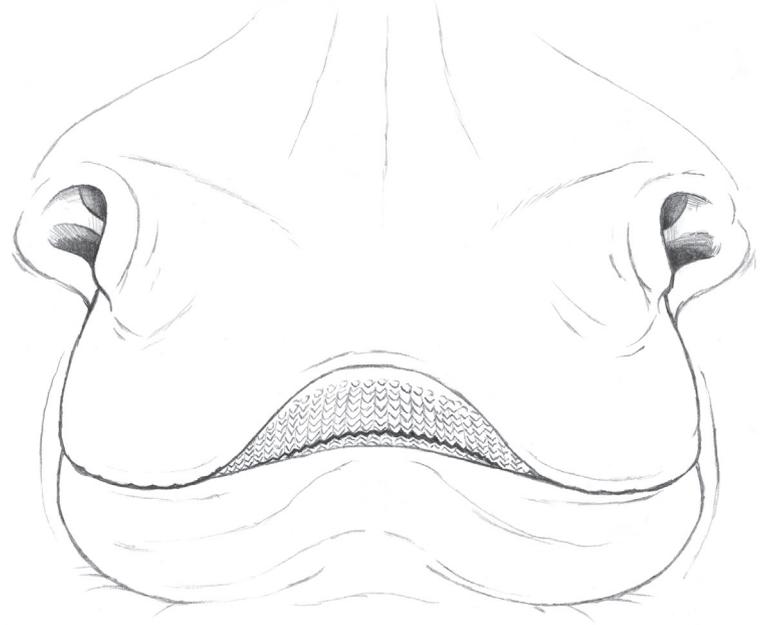


*Raja undulata*,  
Undulate Ray

(Not to scale)

## TEETH

In the upper jaw there are 38-60 rows of teeth. The teeth of mature males are sharper than the teeth of mature females and juveniles (Stehmann and Bürkel, 2000).



## ECOLOGY & BIOLOGY

### HABITAT

The Spotted Ray is found from shallow waters to a depth of 530m (1,740ft) with the majority of the population found from 100-500m (330-1,640ft). It lives on soft substrates, preferring sand, in coastal seas and on continental shelves (Ellis *et al.*, 2007).

### EGGCASE

1. 53-78mm in length (excluding horns).
2. 30-50mm in width.
3. No keels (Shark Trust, 2008).

Similar eggcase to the Cuckoo Ray, *Leucoraja naevus*.

### DIET

Juveniles feed almost exclusively on small crustaceans such as amphipods, isopods and naupliids (Ellis *et al.*, 2007). Adults prey on larger crustaceans and teleost fish (Picton and Morrow, 2005).

### REPRODUCTION

The Spotted Ray reaches sexual maturity at a total length of around 55cm, which corresponds to an age of 3.5-4 years of age (Gallagher *et al.*, 2005). Female Spotted Rays lay their eggcases in shallow water in early summer from April through to July (Whitehead *et al.*, 1986). They lay a maximum of 60 to 70 eggs per year with an average number of approximately 24 to 60 (Ellis *et al.*, 2007. Luna, 2009). The eggcases measure 53-78mm long (excluding horns) and 30-50mm wide. The embryos take 5-6 months to develop (Shark Trust, 2008).



## COMMERCIAL IMPORTANCE

The Spotted Ray is not targeted due to its small size but larger individuals are regularly landed and sold in multispecies trawl fisheries across their range (Ellis *et al.*, 2007). Often confused with the Blonde Ray, *Raja brachyura*, on fishmarkets.

## THREATS, CONSERVATION, LEGISLATION

As one of the smallest rays in the northeast Atlantic and Mediterranean, the Spotted Ray is not targeted by commercial fisheries. However, it is landed and sold across its range when taken as bycatch in multispecies trawls and forms a commercially important part of some localised fisheries (Ellis *et al.*, 2007).

Its small body size and relatively high recruitment rate means that it is less vulnerable to fishing pressure than many of the larger European skate. In the intensively trawled Mediterranean, no significant population drop has been observed despite minor fluctuations (Ellis *et al.*, 2007).

All rajids are managed under a Total Allowable Catch (TAC) system in EU waters. Between 1999 and 2005 the 6,060t TAC was reduced by 47% and by a further ~50% from 2005 to 2008 (ICES, 2008). Originally the TAC applied only to areas IIa and IV, however in January 2009 the TAC was extended to include ICES divisions IIa, IIIa, IV, VIa-b, VIIa-k, VII and IX. The table below gives a summary of the TAC's for the years 2004 to 2009.

ICES Division	2004	2005	2006	2007	2009	2009
IIa, IV	3,503	3,220	2,737	2,190	1,643	1,643
IIIa	N/A	N/A	N/A	N/A	N/A	68
VIa-b, VIIa-c, VIIe-k	N/A	N/A	N/A	N/A	N/A	15,748
VIIId	N/A	N/A	N/A	N/A	N/A	1,044
VIII, IX	N/A	N/A	N/A	N/A	N/A	6,423

(All figures in tons. European Union, 2009)

Since 2008 European countries have been required to record most skate and ray landings by species to give a clearer picture of the status of Rajid populations in EU waters (ICES, 2008). Some Sea Fisheries Committees (SFC) around the UK have byelaws which stipulate a minimum disc width (DW) for landed skates and rays, measured from the extreme tips of the pectoral fins. The SFC's which implement these and the details are shown in the table below.

SFC	DW (cm)	Other
Cumbria	45	Cannot land wings less than 22cm in their maximum dimension
Kent & Essex	40	Cannot land wings less than 19cm in their maximum dimension
Southern	40	Cannot land wings less than 20cm in their maximum dimension
South Wales	45	Cannot land wings less than 22cm in their maximum dimension
States of Guernsey	36	

(Cumbria SFC, Unknown; Kent & Essex SFC, Unknown; South Wales SFC, Unknown; Southern SFC, 2006; NFFO, 2004)

## THREATS, CONSERVATION, LEGISLATION

However, such localised management strategies are unlikely to be significant for the conservation of regional populations (Fowler *et al.*, 2005). Many recreational anglers return any sharks, skates and rays they catch alive and some angling clubs have begun tag and release programmes (Holt, 2005).

## IUCN RED LIST ASSESSMENT

Least Concern (2007).

## HANDLING AND THORN ARRANGEMENT

- Handle with care.
- Row of strong midline thorns.



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