

**ECOREGION**      **Widely distributed and migratory stocks**  
**SUBJECT**        **European Commission special request on spatial distribution, stock status, and advice on *Dipturus* species**

#### Advice summary

The larger *Dipturus* cf. *intermedia* occurs in the northern North Sea and off the northwest coast of Scotland, and *D.* cf. *flossada* is the predominant species in the Celtic Sea and around Rockall. The two species overlap over a wide part of the Celtic seas ecoregion. There are insufficient data to delineate the more southerly and offshore distributional limits of the two species.

In the North Sea, Celtic seas, and the Bay of Biscay and Atlantic Iberian waters, the *Dipturus* complex is considered to be depleted. Advice in each area is that there should be no targeted fishery for either *Dipturus* cf. *flossada* or *Dipturus* cf. *intermedia*, based on the precautionary approach for data-limited stocks, and measures should be taken to minimize bycatch.

Additional measures should be identified that can regulate exploitation of the complex. Such measures may include seasonal and/or area closures, technical measures, and tailored measures for target fisheries. Such measures should be developed by stakeholder consultations, considering the overall mixed fisheries context.

Information on identification is provided to enable fishers, port staff, and enforcers to separate the two species.

#### Request

*Dipturus batis*, the common skate, is now considered to consist of two species. *Dipturus* cf. *flossada* and *Dipturus* cf. *intermedia* are considered to form part of the *Dipturus* complex. According to its depleted situation (stock described in scientific papers as the first clear case of a fish species brought to the brink of extinction by commercial fishing), there is an existing management scheme as for *Dipturus batis*, mainly a ban on landing. It is worth to know whether there are different abundances/distributions of the two species concerned.

A special request is addressed to ICES for advice on an individual species basis for the two components of the common skate. Clarification on identification aspects of the two species of common skate in the advice is also needed.

ICES is requested to answer the following questions:

1. Are the spatial distributions of these species different? Particularly important is to determine whether the distribution of this two species overlaps.
2. What is the status of these stocks and the catch advice in all relevant ecoregions (special interest in the ICES areas IIa, VI, VII and IV)?
3. On a practical basis, is there any relatively straightforward way to distinguish this two species on vessel's deck by the crew?

#### ICES response to the request

##### 1 Spatial distributions

Distribution of the two species is shown in Figure 9.3.2.4.1. There is an area of overlap in the Celtic Sea/Southern Ireland and another at Rockall. Recent trawl surveys have indicated that only *D.* cf. *intermedia* occurs in the northern North Sea (ICES Division IVa) and is more frequent off the northwest coast of Scotland (Division VIa). However, this species also occurs off the west coast of Ireland and in the Celtic Sea (Subarea VII). Trawl surveys indicate that *D.* cf. *flossada* is the more common species on the Rockall Bank (Division VIb) and in the Celtic Sea (Divisions VIIg–h). There are insufficient data to delineate the more southerly and offshore distributional limits of the two species.

Given that much data for the two species are confounded, it is problematic to identify longer-term data sets that separate both the species. *D. batis* was originally declared depleted based on its extirpation or near extirpation from areas of former habitat (including parts of the English Channel, Irish Sea, southern and central North Sea). It is currently unclear to what extent each species has declined. Furthermore, the southern and western geographic limits of both species are also unclear.

Information was provided from several countries, representing a broad geographic area within the Northeast Atlantic, about survey data, genetic studies, and a review of museum specimens.

Survey data, mainly from the international bottom trawl survey (IBTS) and deep-water surveys, were provided by England, France, Germany, Ireland, Portugal, Scotland, and Spain. Port sampling information was provided by Ireland, Scotland, and Portugal. A recent MSc. project that examined museum specimens to determine the correct identification was also provided (Viinamäki, 2010). Data from a recent Fishery Science Partnership were summarized (Ellis *et al.*, 2012), and the full report from this project will be available shortly (Bendall *et al.*, in press). Where geographical information for records was provided, these data were also included. All data were pooled to produce the map in Figure 9.3.2.4.1, illustrating confirmed specimens of either *D. cf. flossada* or *D. cf. intermedia*.

While there appears to be a different geographical distribution of the two species, with *D. cf. flossada* being more north-westerly and southerly than *D. cf. intermedia*, these data show that there is a large area of overlap in the Celtic seas where both species co-exist, and another area of overlap at Rockall.

## 2 Summary of stock status and advice

The perceived status of *Dipturus batis* is presented here by ecoregion.

North Sea: The common skate (*Dipturus batis*) complex is now considered to be depleted in the North Sea. Limited information suggests that only *D. cf. intermedia* is found in the North Sea ecoregion, and only to the north where it likely merges with the neighbouring population in Subareas VI and II.

Based on the precautionary approach, ICES advises that there should be no targeted fishery for either *Dipturus cf. flossada* or *Dipturus cf. intermedia*, and measures should be taken to minimize bycatch.

Additional measures should be identified that can regulate exploitation. Such measures may include seasonal and/or area closures, technical measures, and tailored measures for target fisheries. Such measures should be developed by stakeholder consultations, considering the overall mixed fisheries context.

Celtic Seas: The common skate (*Dipturus batis*) complex is considered to be depleted in the Celtic Sea ecoregion. Individuals are rarely encountered in surveys.

Based on the precautionary approach, ICES advises that there should be no targeted fishery for either *Dipturus cf. flossada* or *Dipturus cf. intermedia*, and measures should be taken to minimize bycatch.

Additional measures should be identified that can regulate exploitation of this stock. Such measures may include seasonal and/or area closures, technical measures, and tailored measures for target fisheries. Such measures should be developed by stakeholder consultations, considering the overall mixed fisheries context.

Bay of Biscay and Atlantic Iberian waters: The common skate (*Dipturus batis*) complex is only rarely encountered in the Bay of Biscay and Atlantic Iberian water ecoregion. Limited information suggests that both *D. cf. intermedia* and *D. cf. flossada* may be found in the northern part of Bay of Biscay.

Based on the precautionary approach, ICES advises that there should be no targeted fishery for either *Dipturus cf. flossada* or *Dipturus cf. intermedia*, and measures should be taken to minimize bycatch.

Additional measures should be identified that can regulate exploitation of this stock. Such measures may include seasonal and/or area closures, technical measures, and tailored measures for target fisheries. Such measures should be developed by stakeholder consultations, considering the overall mixed fisheries context.

## 3 Identification

Iglesias *et al.* (2010) provided a list of methods to identify a *D. batis* specimen as either *D. cf. flossada* or *D. cf. intermedia* (Table 9.3.2.4.1). Of the six methods used, one requires the use of a microscope, and so is not a suitable method for use on commercial vessels. Of the other methods, ICES considers that at least two must be used to ensure accurate identification. Scientists in the field found that using two of the following methods:

- The shape of the markings on the dorsal surface;
- The direction that the caudal thorns point; and
- The relative distance between the two dorsal fins.

is enough to confirm species identity. No special tools and minimal training is required to observe these features.

A genetic study on samples collected by the Spanish Porcupine survey agreed with the morphometric identifications of specimens (Rodríguez-Cabello *et al.*, 2012).

**Table 9.3.2.4.1** Features that can be used to positively identify specimens of blue skate and flapper skate.

Common name	Blue skate	Flapper skate
Proposed scientific name	<i>Dipturus cf. flossada</i>	<i>Dipturus cf. intermedia</i>
Eye	Pale yellow iris	Olive-green iris
‘Eye spots’ on wing	Dark ocellus surrounded by a pale ring	Blotch of pale spots in a group
Lateral thorns on the tail	Lateral thorns perpendicular to tail	Lateral thorns angled
Inter-dorsal space	Short	Long
Teeth	Base of teeth narrower	Base of teeth broader
Length at 50% maturity	115 cm (male); 123 cm (female)	186 cm (male); 198 cm (female)
Maximum length	ca. 150 cm	285 cm

**Additional considerations**

Further investigations into the taxonomic issues regarding these and related species are required. It is recommended that these species continue to be referred to as “the common skate complex *Dipturus batis*” and, for individual species, *Dipturus cf. flossada* or *Dipturus cf. intermedia* until the appropriate taxonomic names have been submitted to and supported by the International Commission on Zoological Nomenclature (ICZN).

**Background**

Two recent papers have demonstrated that *Dipturus batis*, frequently referred to as common skate, is in fact a complex of two species, mislabelled since the 1920s (Iglesias *et al.*, 2010; Griffiths *et al.*, 2010). The first of these papers provided characteristics that could be used to visually discriminate the two species, as well as providing genetic evidence (Iglesias *et al.*, 2010). A subsequent study independently confirmed the genetic differences and also provided information on the distributions of the two species.

Hence, the current scientific name for common skate *D. batis* includes two species, provisionally named blue skate (*D. cf. flossada*) and flapper skate (*D. cf. intermedia*) (Iglesias *et al.*, 2010). This provisional split has not been submitted to or ratified by the ICZN. Furthermore, as a Linnean type, it is likely that the ICZN will want the species name ‘*batis*’ to be retained, especially as it has been in widespread use for about 100 years. In this case, it is more likely that the form described by Iglesias *et al.* (2010) as *D. cf. flossada* will remain as *D. batis*, and the larger species will be termed *D. intermedia*. Until the nomenclature of this genus is resolved, there is potential confusion on using the various names in legal documents.

“*Dipturus batis*” has been placed on the prohibited species list of successive European TAC regulations since 2010. The use of this nomenclature may cause problems if one of the two species has a different stock status to the other. As a result of this the NWWRAC sent a mail on 2 April 2012 to the Commission, raising the concerns of the Focus Group meeting on Skates, Rays and Sharks. This meeting was held in Paris on 29 February 2012 – the report is available on the NWWRAC website:

[http://www.nwwrac.org/admin/publication/upload/MINUTES\\_NWWRAC\\_FOCUS\\_GROUP\\_SKATES\\_RAYS\\_SHA\\_RKS\\_PARIS\\_290212\\_EN.pdf](http://www.nwwrac.org/admin/publication/upload/MINUTES_NWWRAC_FOCUS_GROUP_SKATES_RAYS_SHA_RKS_PARIS_290212_EN.pdf)



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## Sources

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