New report of the Antarctic ascidian *Corella eumyota* (Tunicata:Asciidiacea) on the Galician coast (north-west Spain)

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The first record of the non-indigenous *Corella eumyota* in the Galicia coast (north-west Spain) is reported. One hundred and forty-one specimens of this solitary ascidian were found on soft bottoms at 12 m depth in the inner part of the Ría de Vigo. This is a species from cooler waters of the southern hemisphere and was recorded for the first time in the northern hemisphere in 2002, in France (Lambert, 2004). The specimens have been compared with Antarctic and South American museum samples. Some intraspecific variability was noted.

INTRODUCTION

Recently, records of non-indigenous species have increased considerably especially in the harbours frequented by trade and pleasure intercontinental ship traffic (Monniot et al., 1985, 2001; Cohen & Carlton, 1998; Lambert & Lambert, 2003). A number of ascidian species are known as introductions. They are carried distances both small and large, between hemispheres throughout the world (Rocha & Kremer, 2005).

*Corella eumyota* Traustedt, 1882 is a solitary ascidian (Phylum Chordata, Subphylum Tunicata, Order Enterogona, Suborder Phlebobranchia) that is distributed throughout the cooler waters of the southern hemisphere in South America, South Africa, Australia, New Zealand and Antarctica (Van Name, 1945; Kott, 1969; Millar, 1982; Kott, 1985; Lambert et al., 1995; Monniot et al., 1983, 2001). In 2002, *C. eumyota* was recorded in the northern hemisphere for the first time, attached to floating docks in two harbours in north-western France (Lambert, 2004). The first records of the species in England were made in September 2004 (Arenas et al., 2006).

During the 2003–2005 benthic fauna monitoring study we found a stable population of *C. eumyota*, in the inner part of Ría de Vigo, north-west Spain, thus extending the known distribution for this species in the northern hemisphere.

MATERIALS AND METHODS

The Spanish samples were collected in spring and winter 2003–2005 during a monitoring study of the benthic fauna over soft bottoms in Ría de Vigo. The study was carried out in 2003 to 2005. The samples (number of samples 5) were taken at 12 m depth with a naturalist trawl (45 cm wide and 21.5 cm high). The effective working time on the bottom was six minutes and the five samples were in a restricted area from 42°17'42.9"N 08°38'31.2"W to 42°17'41"N 08°38'36"W.

A subsample of 10 dm³ of sediments was taken randomly from each catch, and immediately sieved and sorted into high-level taxa. The ascidians were photographed, anesthetized with menthol and preserved in 4% seawater formaldehyde for later study.

The southern hemisphere specimens used for taxonomic comparison, from Antarctica and the Argentina Sea, were borrowed from the ascidian collection at the National Museum of Buenos Aires, Argentina. Also, we took into account the taxonomic characteristics described in the literature (Van Name, 1945; Lambert, 2004).

RESULTS AND DISCUSSION

One hundred and forty-one specimens of *Corella eumyota* were collected in Estrecho de Rande (Ría de Vigo) (Figure 1). Ascidians were collected from soft
Mytilus galloprovincialis ±40 longitudinal vessels
50–70 oral tentacles
Antarctica and Argentina Sea
50–100 oral tentacles, over polychaets
Lambert, 2004
Dorsal tubercle in U shape
Van Name, 1945
Up to 60 longitudinal vessels
Chaetopterus variopedatus
Atrial siphon in the middle of
Corella eumyota
Large aggregations in a compact mass
Corella eumyota
Isolated individuals
Table 2. Morphological comparison of different localities and literature.

<table>
<thead>
<tr>
<th>Ría de Vigo</th>
<th>Antarctic and Argentina Sea</th>
<th>Lambert, 2004</th>
<th>Van Name, 1945</th>
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</thead>
<tbody>
<tr>
<td>Close siphons</td>
<td>Atrial siphon in the middle of the body, far from the oral siphon</td>
<td>Base of atrial siphon at about the middle of the body</td>
<td>Variability of distance between siphons</td>
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<td>50–70 oral tentacles</td>
<td>50–70 oral tentacles</td>
<td>Dorsal tubercle in U shape</td>
<td>50–100 oral tentacles</td>
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<tr>
<td>Dorsal tubercle in U shape</td>
<td>&gt;40 longitudinal vessels</td>
<td>Isolated individuals</td>
<td>Up to 60 longitudinal vessels</td>
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<td>40 longitudinal vessels</td>
<td>Large aggregations in a compact mass</td>
<td>Large aggregations in a compact mass</td>
<td>Large aggregations in a compact mass and isolated individuals</td>
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<td>Isolated individuals</td>
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Figure 2. Aggregations of individuals of Corella eumyota collected in Ría de Vigo (2004) where they were so tightly adherent to one other.

The morphological similarity among all these populations suggests that they may have the same origin; the widespread distribution of several established populations suggests that the species has been in Europe for some time. The species might have settled first in Britain and later in Ría de Vigo, or vice-versa, due to the intense maritime traffic that supports these ports between them. Conversely, they could be two independent settlement cases, due to the important ship traffic to and out of the port of Vigo. From this port numerous ships depart to fisheries in the southern hemisphere, Indian Ocean and Pacific Ocean, and in many of the southern high latitude areas where this species is present. Corella eumyota will likely continue its spread to other sites in the northern hemisphere. Because it is a brooder, and tends to accumulate in large clumps, it could become a significant fouler of longline mussel and oyster culture and thus, any new arrivals should be immediately eradicated. As Lambert (2004) indicates, a genetic comparison of these populations with those from southern hemisphere locations is necessary to determine the origin and mechanisms of spread from this species on the Galician coast.

REFERENCES


