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The spread of *Aoroides longimerus* Ren & Zheng, 1996 across the Mediterranean and the Atlantic: genetic diversity, anthropogenic transport, and ecological implications

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Text S1. Detailed information on sampling surveys.

Portugal, Spain and Morocco

In May-June 2011, a total of 42 marinas were sampled across the entire Iberian Peninsula and Northern Africa (Ros *et al*., 2015) (Table 1, Table S1). The survey was carried out as part of a general sampling program to characterise the expansion of *Caprella scaura* along the Iberian Peninsula and adjacent areas (see Ros *et al*., 2014). In each marina, three colonies of the erect bryozoan *Bugula neritina* were collected from the submerged portions of floating pontoons and fixed *in situ* in 90% ethanol. In the laboratory, the colonies were washed through a 0.5 mm sieve and their associated communities were checked for the presence of *Aoroides longimerus.* Selected marinas from the Southern Iberian Peninsula were resampled in June-July 2017 and April-May 2019 (Table S1). During the 2017 survey, fouling organisms growing on artificial hard substrates, including pontoons, ropes, wheels, buoys and ship hulls, were sampled. These included red and green algae, hydroids, bryozoans, ascidians and mollusks, along with their associated vagile assemblages. Samples were hand-collected, fixed in 90% ethanol and taken to the laboratory (Martínez-Laiz *et al*., 2018). In 2019, the polychaete *Sabella spallanzanii* (Gmelin, 1791) was sampled from the pontoons and associated fauna was examined for the presence of *A. longimerus*. In addition to marinas, four off-coast aquaculture facilities were also sampled in Spain from 2010 to 2023 (Table S1). These sites (Granada, Murcia, Guardamar del Segura and Tarragona) included sea cages stocked with farmed gilthead sea bream (*Sparus aurata* Linnaeus, 1758) and European sea bass (*Dicentrarchus labrax* (Linnaeus, 1758)). Samples were collected by scraping fouling organisms from shallow ropes of the mooring lines (1-10 m depth). Subsequently, they were sieved through a 0.5 mm mesh with seawater and preserved in 4% formalin seawater solution (see Fernandez-Gonzalez & Sanchez-Jerez, 2017).

In the marina of Quinta do Lorde, Madeira, Portugal (Table 1), several artificial prototype devices consisting mainly of PVC plates (14 cm × 14 cm × 0.3 cm) and CDs (see Diem *et al.*, 2023 for details of the structures) were deployed on 2 July 2018 (3-6 m depth) and collected on 30 January 2019. The associated fauna was sorted and checked for the presence of *A. longimerus*. Additional fouling samples from PVC plates (1-1.5 m depth) (see details in Ramalhosa *et al*., 2019, 2021) were collected at the same marina in June 2024.

In the framework of a study about the potential effects of biofilms on the establishment of sessile macrofouling communities (see Cacabelos *et al*., 2020), associated vagile communities were also examined. For that, a set of PVC settlement plates (14 cm × 14 cm × 0.3 cm) were placed at seven sites in the Ría de Vigo (Galicia, NW Iberian Peninsula) between 2 and 15 km apart, including floating piers (Cíes) and marinas/small harbours (Cangas, Davila, Moaña, Museo del Mar, Nautico, Toralla) (Table 1). Plates were collected in two maturing times, three and nine months after deployment, corresponding to April and August 2019, respectively. In each period, the associated vagile communities were preserved in 96% ethanol. In the laboratory, samples were washed through a 0.5 mm sieve in order to retain

macrofaunal specimens. Amphipod assemblages were sorted, identified to species level and counted. Additionally, an aquaculture facility (mussel farm) in the Ría de Vigo was also sampled in December 2021-January 2022 by scraping fouling organisms from shallow ropes of the mooring lines (1-10 m depth) (Table 1).

As a part of a monitoring programme of marine habitats in the Port of Sines, Portugal (2019-2023), PVC plates (10 cm x 10 cm x 0.6 cm) were placed in commercial port terminals and the marina (Table 1). Each replicate consisted of three PVC plates and a polypropylene cable, held in tension in the water column by a weight at the end (CIEMAR, 2021). The plates of each structure were placed at different depths: 1 m below the water surface; in the middle of the water column; and 1 m above the bottom. Structures were collected after six months of immersion.

During different surveys to characterise marine communities of Tagus and Sado estuaries, and Aveiro region (2021-2024), Portugal, fouling communities were also sampled from ports and marinas (Table 1, Table S1).

To determine the potential presence of *A. longimerus* in the Canary Islands, Spain, ports and rhodolith seabeds close to aquaculture facilities were sampled in Gran Canaria. Samples were collected from four sites in this island during September 2023 and October 2024: the Port of Taliarte, the Port of Las Palmas de Gran Canaria (including Muelle de la Luz), and Tufia (Table S1). Samples were collected by scraping ropes colonized by epibionts and hydroids, submerged tires, pontoons, boat hulls, and buoys. When feasible, entire ropes were removed and transported to the laboratory for comprehensive analysis. In the case of rhodolith seabeds close to aquaculture facilities, five random samples were collected using a 20 cm × 20 cm quadrant to ensure representative coverage. Additionally, two more islands were sampled in 2023, Tenerife (marinas of Garachico and Las Galletas) and Fuerteventura (marina of Gran Tarajal). Fouling communities were collected from pontoons, ropes and buoys, and associated fauna of the bryozoan *Virididentula dentata* (Lamouroux, 1816) was also studied (Table 1).

France

As a part of a monitoring programme of sessile and vagile fauna in marinas from Normandy, France (Atlantic coast), PVC plates (0.0625 m^2) (smooth and sanded) were deployed in autumn 2018 in five marinas (Granville, Cherbourg, Ouistreham, Bassin Vauban and Dieppe) (Table 1, Table S1) at 1.5 m depth. PVC plates were collected in June and October 2021, and May and October 2022, and associated fauna was identified. During the four sampling events, scrapings (5 replicates of 0.0625 m^2) were collected from under the pontoons (depth 0.2-0.3 m) and piles (at low tide except for Bassin Vauban and Ouistreham where piles were submerged all the time, 1 m depth). As the surface area of the PVC plates matched that of the scrapings (0.0625 m^2), comparison of *A. longimerus* abundance among pontoons, piles and PVC plates (smooth vs sanded) were possible on a temporal basis from June 2021 to October 2022.

Additionally, floating pontoons and ropes were explored in marinas from the Brittany coast (France) during the period 2014-2022 (Table 1, Table S1) in the framework of several experimental and monitoring programmes conducted by the *Station Biologique de Roscoff* (Leclerc *et al*., 2024).

Floating pontoons in marinas from the Bay of Brest (Brittany, France) were studied since 2014 (Table 1) in the framework of surveys conducted by the *Institut Universitaire Européen de la Mer (IUEM)* (University of Brest).

Fouling communities were sampled in Leucate (Golfe du Lion, Mediterranean coast) and Dinard (Brittany, Atlantic coast) during two surveys organized by the Muséum national d'Histoire Naturelle in Paris in autumn 2023 and summer 2024, respectively (Table 1). In order to characterise the shallow benthic environments, samples were taken by scuba-divers on pontoons and in the harbours. Additionally, in summer 2023 and 2024 pontoons in Arcachon (Arcachon Bay, Atlantic coast) and Barcares (Golfe du Lion, Mediterranean coast) were also sampled ca. 0.5 m depth during a personal collection (Gouillieux, pers. comm) (Table 1).

The Netherlands

In order to streamline and better coordinate various marine NIS monitoring programs and surveys (since 2006), the Marine Alien Species Detection Network of the Netherlands was established in 2021 by the Netherlands Office for Risk Assessment and Research (BuRO) (Gittenberger *et al*., 2023). To cover a wide range of habitats, various sampling methods were employed, including settlement plates (14 cm × 14 cm), scraped samples from jetties and floating docks in ports and marinas, dredges, bottom grabs, and gelatinous zooplankton nets. Sampling sites encompassed not only vector-related sites, like ports and shellfish production areas, but also sites that may serve as stepping stones, such as navigational buoys along the North Sea coast (Table 1, Table S1).

Tunisia

Two off-coast aquaculture facilities, farming gilthead sea bream and sea bass, were sampled in May 2013 (Table S1). Samples were collected by scraping fouling organisms from shallow ropes of the mooring lines (1-10 m depth).

Subsequently, they were sieved through a 0.5 mm mesh with seawater and preserved in 4% formalin seawater solution (see Fernandez-Gonzalez & Sanchez-Jerez, 2017).

As part of Rapid Assessment Surveys (RAS) for NIS in Tunisia (Campbell *et al*., 2007; Chebaane *et al.,* 2019), biofouling samples were collected in August 2021 from six marinas: Bizerte, Sidi Bou Said, Yasmine Hammamet, Kantaoui, Monastir, and Djerba. These samples focused on a range of natural substrates, primarily including seaweeds, hydroids, and bryozoans, collected from the sea surface to a depth of 1 m, to assess the presence of NIS. Samples were preserved in 96% ethanol and sieved through a 0.5 mm mesh to retain both vagile and sessile organisms (Table S1).

Additional sampling was conducted in 2022-2023 as part of a broader effort to monitor benthic biodiversity in the Gulf of Gabès (Tunisia, central Mediterranean Sea) (Table 1). This monitoring encompassed various scientific projects across different habitats, including harbours and intertidal zones. Two sampling methods were employed: the Van Veen grab (0.05 m²) for harbour ecosystems and a corer for intertidal zones (0.0225 m²).

Italy, Croatia and Greece

In April 2011, an aquaculture facility from Follonica, Italy, farming gilthead sea bream and sea bass, was sampled (see Fernandez-Gonzalez & Sanchez-Jerez, 2017) (Table S1). Within a monitoring programme (2018-2022) of marinas in the Gulf of La Spezia, Ligurian Sea, PVC plates (14 cm × 14 cm × 0.3 cm) were placed in four marinas (Le Grazie, Santa Teresa, Fezzano and Portovenere) at 1 m depth (Table 1). Plates were oriented horizontally and facing downwards, kept at 1 m depth with the use of a brick. All the plates were immersed for three months, from the end of April until the end of July of each year. Artificial environments (harbours and marinas) from the Italian regions Lazio, Abruzzo, Sicilia, Puglia, Friuli Venezia Giuli and Emilia Romagna were also investigated for the presence of *A. longimerus* (Table S1). Samples were collected by scraping the fouling organisms from various artificial substrates (wharf wall, floating moorings, ropes, and buoys). A 20 cm × 20 cm hand-operated net (0.2 mm mesh size), provided with a stainless-steel blade on the board, was used. Regarding the mooring lines, an area corresponding to approximately 1 m of rope was scratched. Additional samples of rocky and soft substrates were also taken. Rocky substrates were collected by SCUBA diving (0.2-5 m) using a standard 20 cm x 20 cm sampling square. All material within the square was collected using a metal blade and hammer and immediately placed in a fine mesh bag (0.2 mm) and brought to the surface. The soft substrates were sampled using a 18 litres van Veen grab and sieved using a 1 mm mesh size. All samples were fixed in 80-85% ethanol and preserved in 75% ethanol.

In October 2010, two aquaculture facilities from Croatia, including sea cages stocked with young Atlantic bluefin tuna *Thunnus thynnus* (Linnaeus, 1758), were sampled by scraping fouling organisms from shallow ropes of the mooring lines (1-10 m depth) (see Fernandez-Gonzalez & Sanchez-Jerez, 2017) (Table S1).

Similarly, in September 2010, an aquaculture facility from Greece (farming gilthead sea bream and sea bass) was sampled by scraping fouling organisms from shallow ropes of the mooring lines (1-10 m depth) (see Fernandez-Gonzalez & Sanchez-Jerez, 2017) (Table S1). Additional sampling in several Greek ports, marinas and aquaculture facilities (Table S1) was conducted from 2020 to 2022 as part of different monitoring programmes, including PVC plates, hull fouling scraping, aquaculture facilities and RAS. These surveys targeted biofouling communities on port docks, ropes, buoys, and other floating structures. The RAS conducted in October and November 2022 covered 12 marinas across Greece. This method involved visual assessment and sampling of biofouling communities on a range of substrates, including floating structures and mooring lines. Samples were preserved in 96% ethanol or 4% formalin. To retain small vagile and sessile organisms, the samples were sieved through a 0.5 mm mesh.

Red Sea and Arabian Gulf

Fouling communities were sampled from ports and marinas in Saudi Arabia at three sites per location, covering seven locations in the Red Sea and four in the Arabian Gulf (Table S1), as part of a 2024 project funded by the National Center for Wildlife. At each site, five PVC plates were deployed seasonally, hung facing downward from docks, pontoons, or benthic reef structures at depths between 1 and 2 m, and retrieved after three months. Four retrievals were carried out, during Feb–Mar, May–Jun, Aug–Sep, and Nov–Dec 2024 (Table S1). Additionally, at each retrieval, five samples of mature fouling communities were scraped from vertical surfaces (e.g., pontoons, docks, or other hard substrata), and five seawater samples (~5 litres each) were filtered using 5 µm filters (47 mm diameter) for environmental DNA (eDNA) analysis.

Upon collection, biofouling samples from plates and scrapings were examined under a stereomicroscope, and voucher specimens for each morphospecies were collected. The remaining biofouling material was blended, subsampled, and preserved in 96% ethanol.

Morphological examination of voucher specimens and DNA metabarcoding analysis of three differente DNA sources (DNA from settlement plate biofouling, DNA from mature fouling scrapings, and eDNA from filtered seawater), were followed to screen for the presence of *A. longimerus*. DNA libraries targeting a 313bp fragment of

the Cytochrome Oxidase Subunit I (CO1) gene were prepared following a two-step procedure (see detailed protocol in Sempere-Valverde *et al*., 2025) and sequenced on a Illumina MiSeq sequencing platform (v3 chemistry) at KAUST (Bioscience CORE Labs). CO1 sequences obtained from barcoded voucher specimens in this study were subsequently compared against the Amplicon Sequence Variant (ASV) libraries derived from each DNA dataset.

Australia and Japan

Extensive collections as part of different projects focusing on fouling communities from Australian harbours and ports were conducted from 1964 to 2002.

Specimens from Japanese coasts (putative native area) were collected from August 1979 to June 2024 during different sampling surveys (see details in Ariyama, 2004, 2022). Although most records have been already published, some new records for the country are provided by the present study (Table 1).

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Table S1. List of localities sampled by the authors where presence of *Aoroides longimerus* Ren & Zheng, 1996 has not been detected.

Country	Locality	Coordinates	Habitat/Substrates	Date
Australia	Coral Bay, Port Essington, Northern Territory	11.18333º S, 132.05667º E	Fouling communities	1983
Australia	Perkins Wharf, Gove Harbour, Northern Territory	12.19383º S, 136.72000º E	Fouling communities	2001
Australia	Yacht Club, Inverell Bay, Gove Harbour, Northern Territory	12.20000º S, 136.71667º E	Fouling communities	2001
Australia	Cargo Wharf, Gove Harbour, Northern Territory	12.20417º S, 136.68083º E	Fouling communities	2001
Australia	Export Wharf, Gove Harbour, Northern Territory	12.20500º S, 136.67000º E	Fouling communities	2001
Australia	Yacht Club Mooring, Darwin Harbour, Northern Territory	12.43333º S, 130.81667º E	Fouling communities	1998
Australia	Near Stokes Hill Wharf, Darwin Harbour, Northern Territory	12.47000º S, 130.84833º E	Fouling communities	1998
Australia	Fort Hill Wharf, Darwin, Northern Territory	12.47150º S, 130.84667º E	Fouling communities	1999
Australia	Stokes Hill Wharf, Darwin Harbour, Northern Territory	12.47167º S, 130.84917º E	Fouling communities	1999
Australia	Inner Fort Hill Wharf, Darwin Harbour, Northern Territory	12.47200º S, 130.84717º E	Fouling communities	1998
Australia	Quara, Northern Territory, Anchorage, Darwin Harbour, Northern Territory	12.47238º S, 130.85687º E	Fouling communities	1998
Australia	Iron Ore Wharf, Darwin Harbour, Northern Territory	12.47250º S, 130.84283º E	Fouling communities	1998, 1999, 2002
Australia	Stevens Rock, Darwin Harbour, Northern Territory	12.48550º S, 130.78517º E	Fouling communities	2002
Australia	East Arm Port, Darwin Harbour, Northern Territory	12.49178º S, 130.88305º E	Fouling communities	1998
Australia	NW of Middle Point, Darwin Harbour, Northern Territory	12.50000º S, 130.85000º E	Fouling communities	1989
Australia	Channel Island, Middle Arm, Darwin Harbour, Northern Territory	12.55000º S, 130.86667º E	Fouling communities	1985
Australia	Spencer Gulf, near Port Pirie, off mouth of Fifth Creek, South Australia	33.20000º S, 137.90000º E	Fouling communities	1979, 1980
Australia	Port Davis Creek, near Port Pirie, Spencer Gulf, South Australia	33.30000º S, 137.90000º E	Fouling communities	1979, 1980

Continued

Table S1 continued

Country	Locality	Coordinates	Habitat/Substrates	Date
Australia	Port Kembla Jetty, New South Wales	34.48333º S, 150.93194º E	Fouling communities	2000
Australia	Bramble Point, Princess Royal Harbour, Albany, Western Australia	35.05972º S, 117.87177º E	Fouling communities	1988
Australia	Central Port Phillip Bay, Victoria	38.06667º S, 144.93333º E	Fouling communities	1970, 1971
Australia	Port Phillip Bay, Victoria	38.09395º S, 144.83992º E	Fouling communities	1969, 1970, 1971, 1972, 1973, 1990, 1991, 1992, 1994, 1995, 1996
Australia	Western Port, Victoria	38.35631º S, 145.24802º E	Fouling communities	1964, 1965, 1968, 1969, 1970, 1973, 1974, 1976, 1981
Croatia	Ugljan	44.02280° N, 15.21950° E	Fouling communities on fish farm	October 2010
Croatia	Brac	43.29550° N, 16.46000° E	Fouling communities on fish farm	October 2010
France	Fécamp	49.76263° N, 0.36671° E	Fouling communities on pontoons	16 May 2022
France	Cherbourg	49.64623° N, 1.62181° W	Fouling communities on pontoons	25 May 2022
France	Saint-Vaast-la-Hougue	49.58753° N, 1.26427° W	Fouling communities on pontoons	12 May 2022
France	Deauville	49.36338° N, 0.07214° E	Fouling communities on pontoons	16 June 2022
France	Ouistreham marina	49.27406º N, 0.24805º W	Fouling communities on PVC plates, floating pontoons and piles	Jun 2021-Oct 2022
France	Trébeurden	48.77032° N, 3.58702° W	Fouling communities on PVC plates	4 Aug 2014
France	Carantec	48.66656° N, 3.88980° W	Fouling communities of oyster farm	1 Sep 2023
France	Saint-Quay-Portrieux	48.64712° N, 2.82010° W	Fouling communities on ropes	12 Sep 2023
France	Saint-Malo	48.63889° N, 2.02592° W	Fouling communities on ropes	7 Sep 2023
Greece	Evoikos Gulf	38.60106º N, 23.33887º E	Fouling communities on ropes associated with *Mytilus galloprovincialis* and *Pinctada radiata*	Nov 2021
Greece	Nafpaktos marina	38.39247º N, 21.82888º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	14 Nov 2022
Greece	Galaxidi marina	38.37558º N, 22.38711º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	13 Nov 2022
Greece	Patras marina	38.26492º N, 21.73802º E	Fouling communities on artificial substrates	13 Jun 2021
Greece	Patras marina	38.26468º N, 21.73801º E	Fouling communities on artificial substrates	13 Jun 2021

Continued

Table S1 continued

Country	Locality	Coordinates	Habitat/Substrates	Date
Greece	Patras marina	38.26444º N, 20.73811º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	26 Nov 2022
Greece	Elefsina	38.03535º N, 23.51996º E	Fouling communities on ship hull	5 May 2022
Greece	Elefsina	38.03141º N, 23.52833º E	Fouling communities on ship hull	3 Mar 2022
Greece	Piraeus marina	37.93604º N, 23.64970º E	Fouling communities on artificial substrates	26 Sep 2020
Greece	Piraeus marina	37.93588º N, 23.64950º E	Fouling communities on artificial substrates	12 Oct 2021
Greece	Piraeus marina	37.93587º N, 23.64940º E	Soft bottom communities inside	26 Sep 2020
Greece	Kyllini marina	37.93547º N, 21.14767º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	26 Nov 2022
Greece	Piraeus	37.92068º N, 23.55437º E	Fouling communities on ship hull	22 Feb 2021
Greece	Piraeus	37.91656º N, 23.56711º E	Fouling communities on ship hull	22 Feb 2021
Greece	Piraeus	37.91117º N, 23.55621º E	Fouling communities on ship hull	27 Feb 2021
Greece	Agios Nikolaos marina (Zakynthos)	37.90664º N, 20.70742º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	25 Nov 2022
Greece	Piraeus	37.90441º N, 23.56144º E	Fouling communities on ship hull	26 Feb 2021
Greece	Piraeus	37.90332º N, 23.54169º E	Fouling communities on ship hull	8 Aug 2021
Greece	Piraeus	37.90266º N, 23.54730º E	Fouling communities on ship hull	2 Nov 2021
Greece	Piraeus	37.89926º N, 23.54162º E	Fouling communities on ship hull	30 Dec 2021
Greece	Piraeus	37.89628º N, 23.54893º E	Fouling communities on ship hull	8 Jun 2021
Greece	Piraeus	37.89000º N, 23.54642º E	Fouling communities on ship hull	12 Sep 2021
Greece	Alikanas marina (Zakynthos)	37.84419º N, 20.78050º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	10 Oct 2022
Greece	Kavos Psarou marina (Zakynthos)	37.84011º N, 20.81983º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	17 Nov 2022
Greece	Tsilivi marina (Zakynthos)	37.82067º N, 20.86733º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	Nov 2022

Continued

Table S1 continued

Country	Locality	Coordinates	Habitat/Substrates	Date
Greece	Zakynthos Port	37.78278º N, 20.89867º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	1-2 Nov 2022
Greece	Epidaurus, Saronikos	37.76537º N, 23.16102º E	Fouling communities on ropes associated with *Mytilus galloprovincialis* and *Pinctada radiata*	Nov 2021
Greece	Lavrio	37.72903º N, 24.06950º E	Fouling communities on ship hull	20 Oct 2020
Greece	Laganas marina (Zakynthos)	37.71531º N, 20.86400º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	22 Oct 2022
Greece	Keri Lake marina (Zakynthos)	37.68228º N, 20.83742º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	22 Oct 2022
Greece	Nafplio marina	37.56772º N, 22.79525º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	10 Nov 2022
Greece	Rhodes marina	36.43343º N, 28.23931º E	Fouling communities on artificial substrates	22 Sep 2020
Greece	Rhodes marina	36.43325º N, 28.23953º E	Fouling communities on artificial substrates	11 Jun 2021
Greece	Rhodes	36.24414º N, 27.77469º E	Fouling communities on ropes associated with *Pinctada radiata*	May 2021
Greece	Rhodes	36.24414º N, 27.77469º E	Fouling communities on ropes associated with *Pinctada radiata*	Jul 2021
Greece	Crete	35.58410° N, 25.24980° E	Fouling communities on fish farm	September 2010
Greece	Underwater Biotechnological Park of Crete, Gournes	35.35701º N, 25.28275º E	Fouling communities on PVC plates	2021, 2022
Greece	Heraklion marina, Crete	35.34398º N, 25.13720º E	Fouling communities on artificial substrates	3 Sep 2020
Greece	Heraklion marina, Crete	35.34342º N, 25.13687º E	Soft bottom communities	3 Sep 2020
Greece	Heraklion marina, Crete	35.34314º N, 25.13661º E	Fouling communities on PVC plates	12 Oct 2021, 1 Sept 2022
Italy	Trieste harbour, Friuli Venezia Giulia	45.64753º N, 13.74357º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	12 Jul 2024
Italy	Trieste harbour, Friuli Venezia Giulia	45.63720º N, 13.74217º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	12 Jul 2024

Continued

Table S1 continued

Country	Locality	Coordinates	Habitat/Substrates	Date
Italy	Trieste harbour, Friuli Venezia Giulia	45.62240º N, 13.74645º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	13 Jul 2024
Italy	Trieste harbour, Friuli Venezia Giulia	45.61317º N, 13.74550º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	13 Jul 2024
Italy	Ravenna harbour, Emilia Romagna	44.49164º N, 12.29169º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	7 Aug 2024
Italy	Cesenatico, Emilia Romagna	44.20581º N, 12.39722º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	24 Aug 2024
Italy	Follonica	42.91433° N, 10.64233° E	Fouling communities on fish farm	April 2011
Italy	Pescara commercial harbour, Abruzzo	42.46593º N, 14.23388º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-0.5 m depth	8 Aug 2024
Italy	Pescara commercial harbour, Abruzzo	42.46578º N, 14.23296º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-0.5 m depth	8 Aug 2024
Italy	Ortona commercial harbour, Abruzzo	42.34743º N, 14.41489º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-0.5 m depth	12 Jul 2024
Italy	Ortona commercial harbour, Abruzzo	42.34652º N, 14.41537º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-0.5 m depth	12 Jul 2024
Italy	Marina of Fossacesia, Abruzzo	42.23662º N, 14.53781º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-0.5 m depth	14 Jul 2024
Italy	Civitavecchia commercial harbour, Lazio	42.09432º N, 11.78407º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.2-1 m depth	26 July 2024
Italy	Civitavecchia commercial harbour, Lazio	42.09373º N, 11.78668º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.2-1 m depth	25 Jul 2024
Italy	Civitavecchia commercial harbour, Lazio	42.09360º N, 11.78948º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.2-1 m depth	25 July 2024
Italy	Civitavecchia commercial harbour, Lazio	42.08983º N, 11.78861º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.2-1 m depth	26 Jul 2024

Continued

Table S1 continued

Country	Locality	Coordinates	Habitat/Substrates	Date
Italy	Santa Marinella, Marina of Riva di Traiano, Lazio	42.05857º N, 11.81523º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.5 m depth	7 Aug 2024
Italy	Dock of Torre Flavia, Lazio	41.95457º N, 12.05613º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.5 m depth	12 Jul 2024
Italy	Marina of San Nicola, Lazio	41.93181º N, 12.11058º E	Rocky natural substrates, 0.5-4 m depth	22 Aug 2024
Italy	Fiumicino, canale dei pescatori, Lazio	41.71880º N, 12.30325º E	Fouling communities on port docks, ropes, buoys and floating structures, 0-0.5 m depth	24 Sep 2024
Italy	Ostia, Lazio	41.71834º N, 12.30325º E	Rocky natural substrates, 0.5-4 m depth	3 Sep 2024
Italy	Marina of Anzio, Lazio	41.44745º N, 12.63440º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.5 m depth	14 Jul 2024
Italy	Formia harbour, Lazio	41.25644º N, 13.61297º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.5 m depth	9 Sep 2024
Italy	Gaeta Gulf, Lazio	41.24941º N, 13.61009º E	Soft bottoms, 13 m depth	2 Aug 2024
Italy	Marina of Gaeta Gulf, Lazio	41.21641º N, 13.57157º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.5 m depth	2 Oct 2024
Italy	Brindisi commercial harbour, Puglia	40.66073º N, 17.96237º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-0.5 m depth	3 Sep 2024
Italy	Brindisi commercial harbour, Puglia	40.65914º N, 17.96431º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-0.5 m depth	3 Sep 2024
Italy	Taranto, Mar Grande, Puglia	40.43420º N, 17.23842º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-3 m depth	24 Aug 2024
Italy	Taranto, Mar Grande, Puglia	40.43099º N, 17.23938º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-0.5 m depth	24 Aug 2024
Italy	Taranto Mar Grande, Puglia	40.43025º N, 17.24027º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-0.5 m depth	24 Aug 2024
Italy	Otranto harbour, Puglia	40.14873º N, 18.49495º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-0.5 m depth	27 Aug 2024

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Table S1 continued

Country	Locality	Coordinates	Habitat/Substrates	Date
Italy	Gallipoli harbour, Puglia	40.05814º N, 17.98274º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-0.5 m depth	29 Aug 2024
Italy	Palermo, La Cala marina, Sicily	38.11916º N, 13.36834º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	23 Mar 2024
Italy	Trapani harbour, Sicily	38.01583º N, 12.49921º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	5 Jun 2024
Italy	Catania harbour, Sicily	37.49204º N, 15.09882º E	Fouling communities on port docks, ropes, buoys and floating structures, 0-0.5 m depth	15 Jun 2024
Italy	Catania harbour, Sicily	37.49105º N, 15.10208º E	Soft bottoms, 19 m depth	12 May 2024
Italy	Catania harbour, Sicily	37.48249º N, 15.10059º E	Soft bottoms, 18 m depth	12 May 2024
Italy	Porto Empedocle harbour, Sicily	37.28619º N, 13.52721º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	2 Jun 2024
Italy	Augusta harbour, Sicily	37.23196º N, 15.21736º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	9 Mar 2024
Italy	Augusta harbour, Sicily	37.20833º N, 15.22758º E	Soft bottoms, 5 m depth	21 Apr 2024
Italy	Augusta harbour, Sicily	37.20484º N, 15.22927º E	Soft bottoms, 5 m depth	21 Apr 2024
Italy	Siracusa harbour, Sicily	37.06852º N, 15.29127º E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	13 Mar 2024
Italy	Avola harbour, Sicily	36.92015° N, 15.16075° E	Fouling communities on port docks, ropes, buoys and floating structures, 0.5 m depth	13 Sep 2024
Italy	Marzamemi harbour, Sicily	36.74111° N, 15.11873° E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	18 Mar 2024
Italy	Portopalo Capo Passero, Sicily	36.67004° N, 15.12601° E	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	5 Aug 2024
Morocco	Tánger marina	35.78731º N, 5.80594º W	Bryozoan *Bugula neritina* on floating pontoons	31 May 2011
Morocco	Kabila marina	35.71986º N, 5.33550º W	Bryozoan *Bugula neritina* on floating pontoons	30 May 2011
Morocco	M-Diq marina	35.68269º N, 5.31364º W	Bryozoan *Bugula neritina* on floating pontoons	30 May 2011
Netherlands	Den Helder port, Wadden Sea	52.96143º N, 4,78118º E	Fouling communities from jetty	30 Sep 2021, 11 Sep 2022, 11 Sep 2023
Netherlands	Ijmuiden pontplein	52.46292º N, 4,63310º E	Fouling communities from jetty	11 Sep 2023

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Table S1 continued

Country	Locality	Coordinates	Habitat/Substrates	Date
Netherlands	Ijmuiden seaport	52.45865º N, 4.56100º E	Fouling communities from floating docks	28 Oct 2022, 11 Sep 2023
Netherlands	Port of Rotterdam, Petroleumhaven	51.96925º N, 4,06827º E	Fouling communities from floating docks	6 Sep 2021, 6 Sep 2022, 4 Sep 2023
Netherlands	Port of Rotterdam, Beneluxhaven	51.95277º N, 4,12518º E	Fouling communities from floating docks	6 Sep 2021, 6 Sep 2022, 4 Sep 2023
Netherlands	Bommenede, Lake Grevelingen	51.73170º N, 3,97302º E	Fouling communities from floating docks	7 Sep 2021, 6 Sep 2022, 12 Sep 2023
Netherlands	Colijnsplaat, Oosterschelde	51.60278º N, 3,84962º E	Fouling communities from floating docks	27 Sep 2021, 12 Sep 2022, 21 Sep 2023
Netherlands	Kortgene marina, Veerse Meer	51.55202º N, 3.81103º E	Fouling communities from floating docks	27 Sep 2021, 13 Sep 2022, 21 Sep 2023
Netherlands	Sloehaven, Vlissingen, Westerschelde	51.46055º N, 3.67332º E	Fouling communities from floating docks	28 Sep 2021, 30 Sep 2022, 20 Sep 2023
Netherlands	Eemshaven port, Wadden Sea	51.44470º N, 6.82552º E	Fouling communities from floating docks	1 Sep 2021, 21 Sep 2022, 26 Sep 2023
Netherlands	Breskens marina, Westerschelde	51.39575º N, 3.57030º E	Fouling communities from floating docks	28 Sept 2021, 11 Sep 2022, 23 Sep 2023
Portugal	Viana do Castelo marina	41.69421º N, 8.82160º W	Fouling communities on pontoons	Sep 2021
Portugal	Leixões marina	41.18637º N, 8.70494º W	Fouling communities on pontoons	Sep 2021
Portugal	Jardim Oudinot marina	40.64405º N, 8.73185º W	Fouling communities on pontoons	14 Oct 2024
Portugal	Costa Nova marina	40.62012º N, 8.74881º W	Fouling communities on pontoons	14 Oct 2024
Portugal	Nazaré marina	39.58627º N, 9.07180º W	Bryozoan *Bugula neritina* on floating pontoons	9 May 2011
Portugal	Vila Franca de Xira marina	38.95463º N, 8.98513º W	Fouling communities on pontoons	Sep 2016
Portugal	Vila Franca de Xira marina	38.95463º N, 8.98513º W	Fouling communities on pontoons	Sep 2022
Portugal	Parque das Nações marina	38.76560º N, 9.09385º W	Fouling communities on pontoons	Jun 2016
Portugal	Parque das Nações marina	38.76558º N, 9.09385º W	Fouling communities on pontoons	Sep 2022
Portugal	Alcantara marina	38.70204º N, 9.16737º W	Fouling communities on pontoons	Mar 2016
Portugal	Alcantara marina	38.70204º N, 9.16737º W	PVC plates	Sep 2023
Portugal	Cascais	38.69274º N, 9.41794º W	PVC plates	Sep 2022
Portugal	Oeiras marina	38.67601º N, 9.31869º W	Fouling communities on pontoons	Mar 2016
Portugal	Oeiras marina	38.67601º N, 9.31869º W	Fouling communities on pontoons	Sep 2022
Portugal	Albufeira marina	37.08487º N, 8.26617º W	Bryozoan *Bugula neritina* on floating pontoons (2011), polychaete *Sabella spallanzanii* (2019)	10 May 2011, 15 May 2019
Portugal	Vilamoura marina	37.07408º N, 8.12343º W	Fouling communities on pontoons	Sep 2021

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Table S1 continued

Country	Locality	Coordinates	Habitat/Substrates	Date
Portugal	Faro marina	37.01497º N, 7.93669º W	Bryozoan *Bugula neritina* on floating pontoons (2011), Fouling communities (2017), polychaete *Sabella spallanzanii* (2019)	11 May 2011, 26 Jun 2017, 15 May 2019
Saudi Arabia	NEOM, Tabuk Province	Sites from 28.17607º N, 34.64192º E to 28.05413º N, 35.19800º E	PVC plates, fouling communities on artificial substrates, water samples	12-13 Feb 2024, 13-14 May 2024, 12-13 Aug 2024, 4-5 Nov 2024
Saudi Arabia	Jubail, Eastern Province	From 27.12718º N, 49.51521º E to 27.01423º N, 49.67779º E	PVC plates, fouling communities on artificial substrates, water samples	19-20 Mar 2024, 5 Jun 2024, 7-8 Sep 2024, 2-4 Dec 2024
Saudi Arabia	Tarout Island, Eastern Province	From 26.60378º N, 50.08167º E to 26.53970º N, 50.08529º E	PVC plates, fouling communities on artificial substrates, water samples	18-20 Mar 2024, 4 Jun 2024, 5-6 Sep 2024, 5-6 Dec 2024
Saudi Arabia	Dammam, Eastern Province	From 26.50919º N, 50.19781º E to 26.4852º N, 50.20154º E	PVC plates, fouling communities on artificial substrates, water samples	13-17 Mar 2024, 6 Jun 2024, 8-9 Sep 2024, 3-7 Dec 2024
Saudi Arabia	Al Khobar, Eastern Province	From 26.24000º N, 50.22200º E to 26.15660º N, 50.19401º E	PVC plates, fouling communities on artificial substrates, water samples	13-14 Mar 2024, 3 Jun 2024, 4-5 Sep 2024, 3-4 Dec 2024
Saudi Arabia	Al Wajh, Tabuk region	From 26.22584º N, 36.45941º E to 25.02203º N, 37.26420º E	PVC plates, fouling communities on artificial substrates, water samples	26-27 Mar 2024, 25-26 Jun 2024, 24-25 Sep 2024, 16-17 Dec 2024
Saudi Arabia	Yanbu, Al Madinah Province	From 24.16870º N, 37.96528º E to 24.07214º N, 38.05239º E	PVC plates, fouling communities on artificial substrates, water samples	6-7 Mar 2024, 11-27 Jun 2024, 15-30 Sep 2024, 10-11 Dec 2024
Saudi Arabia	Thuwal, Makkah Province	From 22.30460º N, 39.09454º E to 22.27996º N, 39.08821º E	PVC plates, fouling communities on artificial substrates, water samples	26-27 Feb 2024, 20-21 May 2024, 19-20 Aug 2024, 18-19 Nov 2024
Saudi Arabia	Jeddah, Makkah Province	From 21.73788º N, 39.12296º E to 21.45349º N, 39.16747º E	PVC plates, fouling communities on artificial substrates, water samples	28 Feb 2024, 24 Apr 2024, 21-22 May 2024, 20-29 Aug 2024, 19-27 Nov 2024
Saudi Arabia	Al Lith, Tihamah Province	From 20.14038º N, 40.25322º E to 20.12119º N, 40.26432º E	PVC plates, fouling communities on artificial substrates, water samples	3-4 Mar 2024, 25-26 May 2024, 26-27 Aug 2024, 25-26 Nov 2024
Saudi Arabia	Jazan, Jazan Province	From 16.90510º N, 42.53727º E to 1607423º N to 42.68908º E	PVC plates, fouling communities on artificial substrates, water samples	5-6 Mar 2024, 28-29 May 2024, 28-29 Aug 2024
Spain	Gijón marina	43.54411º N, 5.66750º W	Bryozoan *Bugula neritina* on floating pontoons	3 May 2011
Spain	A Graña marina	43.47906º N, 8.25959º W	Bryozoan *Bugula neritina* on floating pontoons	7 May 2011
Spain	Santander marina	43.42838º N, 3.80902º W	Bryozoan *Bugula neritina* on floating pontoons	2 May 2011
Spain	A Coruña marina	43.36830º N, 8.39814º W	Bryozoan *Bugula neritina* on floating pontoons	4 May 2011
Spain	L'Estartit marina	42.05400º N, 3.20603º E	Bryozoan *Bugula neritina* on floating pontoons	25 Jun 2011
Spain	Barcelona marina	41.37725º N, 2.18292º E	Bryozoan *Bugula neritina* on floating pontoons	26 Jun 2011
Spain	Vilanova Geltrú marina	41.21358º N, 1.72906º E	Bryozoan *Bugula neritina* on floating pontoons	27 Jun 2011

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Table S1 continued

Country	Locality	Coordinates	Habitat/Substrates	Date
Spain	Tarragona marina	41.10861º N, 1.25194º E	Bryozoan *Bugula neritina* on floating pontoons	27 Jun 2011
Spain	Tarragona	40.87880º N, 0.58800º E	Fouling communities on fish farm	October 2010
Spain	Benicarló marina	40.41536º N, 0.43367º E	Bryozoan *Bugula neritina* on floating pontoons	27 Jun 2011
Spain	Oropesa del mar marina	40.07533º N, 0.13331º E	Bryozoan *Bugula neritina* on floating pontoons	28 Jun 2011
Spain	Burriana marina	39.86081º N, 0.07275º W	Bryozoan *Bugula neritina* on floating pontoons	28 Jun 2011
Spain	Valencia marina	39.42811º N, 0.33239º W	Bryozoan *Bugula neritina* on floating pontoons	28 Jun 2011
Spain	Dénia marina	38.84551º N, 0.11161º E	Bryozoan *Bugula neritina* on floating pontoons	28 Jun 2011
Spain	Alicante marina	38.33964º N, 0.48631º W	Bryozoan *Bugula neritina* on floating pontoons	29 Jun 2011
Spain	Guardamar del Segura	38.09600º N, 0.60430º W	Fouling communities on fish farm	July 2010, 30 Jun 2022
Spain	Torrevieja marina	37.97472º N, 0.68322º W	Bryozoan *Bugula neritina* on floating pontoons	29 Jun 2011
Spain	Murcia	37.81550° N, 0.69550º W	Fouling communities on fish farm	28 Jul 2022, May 2023
Spain	Granada	37.22983º N, 1.74666º W	Fouling communities on fish farm	May 2010
Spain	El Rompido marina	37.21617º N, 7.12872º W	Bryozoan *Bugula neritina* on floating pontoons (2011), polychaete *Sabella spallanzanii* (2019)	16 May 2011, 16 May 2019
Spain	Isla Cristina marina	37.19600º N, 7.32747º W	Bryozoan *Bugula neritina* on floating pontoons (2011), polychaete *Sabella spallanzanii* (2019)	16 May 2011, 16 May 2019
Spain	Isla Canela marina	37.18650º N, 7.34000º W	Bryozoan *Bugula neritina* on floating pontoons (2011), Fouling communities (2017), polychaete *Sabella spallanzanii* (2019)	16 May 2011, 26 Jun 2017, 16 May 2019
Spain	Carboneras marina	36.99106º N, 1.89633º W	Bryozoan *Bugula neritina* on floating pontoons	30 Jun 2011
Spain	Almería marina	36.83150º N, 2.46167º W	Bryozoan *Bugula neritina* on floating pontoons (2011), polychaete *Sabella spallanzanii* (2019)	1 Jul 2011, 27 Jun 2017, 30 Apr 2019
Spain	Roquetas marina	36.75653º N, 2.60644º W	Bryozoan *Bugula neritina* on floating pontoons	1 Jul 2011
Spain	La Caleta marina	36.74883º N, 4.06731º W	Bryozoan *Bugula neritina* on floating pontoons (2011), Fouling communities (2017)	3 Jul 2011, 28 Jun 2017
Spain	Chipiona marina	36.74486º N, 6.43033º W	Bryozoan *Bugula neritina* on floating pontoons (2011), Fouling communities (2017)	17 May 2011, 1 Jul 2017

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Table S1 continued

Country	Locality	Coordinates	Habitat/Substrates	Date
Spain	Motril marina	36.72417º N, 3.52875º W	Bryozoan *Bugula neritina* on floating pontoons (2011), Fouling communities (2017)	2 Jul 2011, 28 Jun 2017
Spain	Málaga marina	36.70824º N, 4.41282º W	Bryozoan *Bugula neritina* on floating pontoons (2011), polychaete *Sabella spallanzanii* (2019)	3 Jul 2011, 29 Jun 2017, 30 Apr 2019
Spain	Almerimar marina	36.69700º N, 2.79178º W	Bryozoan *Bugula neritina* on floating pontoons	1 Jul 2011
Spain	Rota marina	36.61664º N, 6.35475º W	Bryozoan *Bugula neritina* on floating pontoons (2011), polychaete *Sabella spallanzanii* (2019)	17 May 2011, 17 May 2019
Spain	Benalmádena marina	36.59597º N, 4.51231º W	Bryozoan *Bugula neritina* on floating pontoons	15 May 2011
Spain	Fuengirola marina	36.54161º N, 4.61719º W	Bryozoan *Bugula neritina* on floating pontoons (2011), Fouling communities (2017)	15 May 2011, 29 Jun 2017
Spain	Puerto América marina	36.54144º N, 6.28400º W	Bryozoan *Bugula neritina* on floating pontoons (2011), Fouling communities (2017), polychaete *Sabella spallanzanii* (2019)	17 May 2011, 2 Jul 2017, 18 May 2019
Spain	Sancti Petri marina	36.39619º N, 6.20839º W	Bryozoan *Bugula neritina* on floating pontoons (2011), polychaete *Sabella spallanzanii* (2019)	17 May 2011, 17 May 2019
Spain	Conil marina	36.29494º N, 6.13633º W	Bryozoan *Bugula neritina* on floating pontoons	17 May 2011
Spain	Barbate marina	36.18414º N, 5.93425º W	Bryozoan *Bugula neritina* on floating pontoons (2011), Fouling communities (2017)	17 May 2011, 1 Jul 2017
Spain	La Línea (Puerto Chico) marina	36.15989º N, 5.35756º W	Bryozoan *Bugula neritina* on floating pontoons (2011), Fouling communities (2017)	15 May 2011, 30 Jun 2017
Spain	Ceuta marina	35.88958º N, 5.31619º W	Bryozoan *Bugula neritina* on floating pontoons	29 May 2011
Spain	Muelle de la luz, Gran Canaria Port, Canary Islands	28.14452º N, 15.42061º W	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	18 Oct 2024
Spain	Las Palmas marina, Gran Canaria Port, Canary Islands	28.12835º N, 15.42631º W	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	23 Oct 2024
Spain	Taliarte Port, Gran Canaria, Canary Islands	27.99083º N, 15.36861º W	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	11 Oct 2024

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Table S1 continued

Country	Locality	Coordinates	Habitat/Substrates	Date
Spain	Tufia, Gran Canaria, Canary Islands	27.95871º N, 15.37269º W	Rhodolith seabeds close to aquaculture facilities	11 Sep 2023
Tunisia	Ghar el Melh	37.31660° N, 10.28050° E	Fouling communities on fish farm	May 2013
Tunisia	Bizerte marina	37.27464º N, 9.88108º W	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	16 Aug 2021
Tunisia	Sidi Bou Said marina	36.86692º N, 10.35167º W	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	16 Aug 2021
Tunisia	Yasmine Hammamet marina	36.37333º N, 10.54708º W	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	18 Aug 2021
Tunisia	Kantaoui marina	35.89417º N, 10.59789º W	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	20 Aug 2021
Tunisia	Monastir marina	35.77958º N, 10.83358º W	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	13 Aug 2021
Tunisia	Mahdia	35.45560° N, 11.09460° E	Fouling communities on fish farm	May 2013
Tunisia	Djerba marina	33.88891º N, 10.85622º W	Fouling communities on port docks, ropes, buoys and floating structures, 0.1-1 m depth	19 Aug 2021

Table S2. Detailed information on voucher material of *Aoroides longimerus* Ren & Zheng, 1996 deposited in Museo Nacional de Ciencias Naturales de Madrid (MNCN), Spain, and Muséum national d'Histoire Naturelle Paris (MNHN) France, including Museum Catalogue numbers, sampling locations, coordinates, collection date, substrates and number of specimens.

Catalogue number	Location	Coordinates	Date	Substrates	Number of specimens
MNCN 20.04/41958	Cascais marina, Portugal	38.69094º N, 9.41855º W	9 May 2011	*Bugula neritina* (pontoons)	2 males
MNCN 20.04/41959	Cangas marina, Ría de Vigo, Galicia, Spain	42.26089º N, 8.78379º W	Aug 2019	Fouling communities on PVC plates	1 male, 1 female
MNCN 20.04/41960	Davila marina, Ría de Vigo, Galicia, Spain	42.23362º N, 8.74283º W	Aug 2019	Fouling communities on PVC plates	4 males, 4 females
MNCN 20.04/41961	Moaña marina, Ría de Vigo, Galicia, Spain	42.27610º N, 8.73481º W	Aug 2019	Fouling communities on PVC plates	3 males, 2 females
MNCN 20.04/41962	Quinta do Lorde marina, Madeira, Portugal	32.74169º N, 16.71191º W	25 Jun 2024	Fouling communities on PVC plates	3 males
MNHN-IU-2023-2236	Leucate harbour, Languedoc-Rousillon, Golfe du Lion, France	42.87º N 3.047º E	28 Sep 2023	On pontoon	1 male
MNHN-IU-2020-3924	Leucate harbour, Languedoc-Rousillon, Golfe du Lion, France	42.87º N 3.047º E	28 Sep 2023	On pontoon	1 male
MNHN-IU-2023-2237	Arcachon harbour, Gironde, Arcachon Bay, France	44.6597º N, 1.1519º W	6 Aug 2024	Fouling communities on pontoon	11 males, 12 individuals
MNHN-IU-2020-3914	Arcachon harbour, Gironde, Arcachon Bay, France	44.6597º N, 1.1519º W	6 Aug 2024	Fouling communities on pontoon	1 male
MNHN-IU-2020-3915	Arcachon harbour, Gironde, Arcachon Bay, France	44.6597º N, 1.1519º W	6 Aug 2024	Fouling communities on pontoon	1 male
MNHN-IU-2020-3916	Arcachon harbour, Gironde, Arcachon Bay, France	44.6597º N, 1.1519º W	6 Aug 2024	Fouling communities on pontoon	1 male
MNHN-IU-2020-3917	Arcachon harbour, Gironde, Arcachon Bay, France	44.6597ºN, 1.1519ºW	6 Aug 2024	Fouling communities on pontoon	1 male
MNHN-IU-2020-3918	Arcachon harbour, Gironde, Arcachon Bay, France	44.6597º N, 1.1519º W	6 Aug 2024	Fouling communities on pontoon	1 male
MNHN-IU-2020-3919	Arcachon harbour, Gironde, Arcachon Bay, France	44.6597º N, 1.1519º W	6 Aug 2024	Fouling communities on pontoon	1 male
MNHN-IU-2020-3920	Arcachon harbour, Gironde, Arcachon Bay, France	44.6597º N, 1.1519º W	6 Aug 2024	Fouling communities on pontoon	1 male
MNHN-IU-2020-3921	Arcachon harbour, Gironde, Arcachon Bay, France	44.6597º N, 1.1519º W	6 Aug 2024	Fouling communities on pontoon	1 male
MNHN-IU-2020-3922	Arcachon harbour, Gironde, Arcachon Bay, France	44.6597º N, 1.1519º W	6 Aug 2024	Fouling communities on pontoon	1 male
MNHN-IU-2020-3923	Arcachon harbour, Gironde, Arcachon Bay, France	44.6597º N, 1.1519º W	6 Aug 2024	Fouling communities on pontoon	1 male

Continued

Table S2 continued

Catalogue number	Location	Coordinates	Date	Substrates	Number of specimens
MNHN-IU-2023-2238	Dinard, Ille-et-Vilaine, Brittany, France	48.6383º N, 2.0266º W	28 Jun 2024	Harbour	1 individual
MNHN-IU-2023-2239	Dinard, Ille-et-Vilaine, Brittany, France	48.6486º N, 2.0232º W	2 Jul 2024	Harbour	1 male
MNHN-IU-2020-3913	Barcares harbour, Languedoc-Rousillon, Golfe du Lion	42.81º N 3.019º E	14 Aug 2023	Fouling pontoon	4 males

Table S3. Specimens of *Aoroides longimerus* Ren & Zheng, 1996 processed in the DNA analyses. In grey, specimens with at least one sequence. All the data are available in BOLD in the project and dataset: ALONG and DS-AORLONG respectively.

Process ID	Sample ID	Country	Region	Exact Site	Available sequences
ALONG001-25	AORLON1	Portugal	Madeira	Quinta do Lorde Marina	16S
ALONG002-25	AORLON2	Portugal	Madeira	Quinta do Lorde Marina	16S
ALONG003-25	AORLON3	Portugal	Madeira	Quinta do Lorde Marina	
ALONG004-25	AORLON4	Portugal	Madeira	Quinta do Lorde Marina	
ALONG005-25	AORLON5	Portugal	Madeira	Quinta do Lorde Marina	CO1
ALONG006-25	AORLON6	Portugal	Madeira	Quinta do Lorde Marina	CO1
ALONG007-25	AORLON7	Portugal	Madeira	Quinta do Lorde Marina	
ALONG008-25	AORLON8	Portugal	Madeira	Quinta do Lorde Marina	
ALONG009-25	AORLON9	Portugal	Madeira	Quinta do Lorde Marina	
ALONG010-25	AORLON10	Portugal	Madeira	Quinta do Lorde Marina	
ALONG011-25	AORLON11	Portugal	Madeira	Quinta do Lorde Marina	CO1
ALONG012-25	AORLON12	Portugal	Madeira	Quinta do Lorde Marina	CO1
ALONG013-25	AORLON13	Portugal	Madeira	Quinta do Lorde Marina	CO1, 16S
ALONG014-25	AORLON14	Portugal	Madeira	Quinta do Lorde Marina	CO1, 16S
ALONG015-25	AORLON15	Portugal	Madeira	Quinta do Lorde Marina	CO1, 16S
ALONG016-25	AORLON16	Portugal	Madeira	Quinta do Lorde Marina	16S
ALONG017-25	AORLON17	Portugal	Madeira	Quinta do Lorde Marina	
ALONG018-25	AORLON18	Portugal	Madeira	Quinta do Lorde Marina	
ALONG019-25	AORLON19	Portugal	Madeira	Quinta do Lorde Marina	
ALONG020-25	AORLON20	Portugal	Madeira	Quinta do Lorde Marina	
ALONG021-25	AORLON21	Spain	Galicia	Moaña	
ALONG022-25	AORLON22	Spain	Galicia	Moaña	
ALONG023-25	AORLON23	Spain	Galicia	Moaña	
ALONG024-25	AORLON24	Spain	Galicia	Moaña	
ALONG025-25	AORLON25	Spain	Galicia	Moaña	
ALONG026-25	AORLON26	Spain	Galicia	Moaña	
ALONG027-25	AORLON27	Spain	Galicia	Davila	
ALONG028-25	AORLON28	Spain	Galicia	Davila	
ALONG029-25	AORLON29	Spain	Galicia	Davila	
ALONG030-25	AORLON30	Spain	Galicia	Davila	
ALONG031-25	AORLON31	Spain	Galicia	Davila	
ALONG032-25	AORLON32	Spain	Galicia	Davila	
ALONG033-25	AORLON33	Spain	Galicia	Moaña	
ALONG034-25	AORLON34	Spain	Galicia	Moaña	
ALONG035-25	AORLON35	Spain	Galicia	Moaña	
ALONG036-25	AORLON36	Spain	Galicia	Moaña	
ALONG037-25	AORLON37	Spain	Galicia	Moaña	
ALONG038-25	AORLON38	Spain	Galicia	Moaña	
ALONG039-25	AORLON39	Spain	Galicia	Cangas	
ALONG040-25	AORLON40	Spain	Galicia	Cangas	
ALONG041-25	AORLON41	Spain	Galicia	Cangas	
ALONG042-25	AORLON42	Spain	Galicia	Cangas	
ALONG043-25	AORLON43	Spain	Galicia	Cíes, Portonovo	
ALONG044-25	AORLON44	Spain	Galicia	Cíes, Portonovo	
ALONG045-25	AORLON45	Spain	Galicia	Cíes, Portonovo	

Continued

Table S3 continued

Process ID	Sample ID	Country	Region	Exact Site	Available sequences
ALONG046-25	AORLON46	Spain	Galicia	Cíes, Portonovo	
ALONG047-25	AORLON47	Spain	Galicia	Cíes, Portonovo	
ALONG048-25	AORLON48	Spain	Galicia	Cíes, Portonovo	
ALONG049-25	AORLON49	Spain	Galicia	Cíes, Portonovo	
ALONG050-25	AORLON50	Spain	Galicia	Cíes, Portonovo	
ALONG051-25	AORLON51	Spain	Galicia	Cíes, Portonovo	
ALONG052-25	AORLON52	Spain	Galicia	Cíes, Portonovo	
ALONG053-25	AORLON53	Spain	Galicia	Davila	
ALONG054-25	AORLON54	Spain	Galicia	Davila	
ALONG055-25	AORLON55	Spain	Galicia	Davila	
ALONG056-25	AORLON56	Spain	Galicia	Davila	
ALONG057-25	AORLON57	Spain	Galicia	Davila	
ALONG058-25	AORLON58	Spain	Galicia	Moaña	
ALONG059-25	AORLON59	Spain	Galicia	Moaña	
ALONG060-25	AORLON60	Spain	Galicia	Moaña	
ALONG061-25	AORLON61	Spain	Galicia	Moaña	
ALONG062-25	AORLON62	Spain	Galicia	Moaña	
ALONG063-25	AORLON63	Spain	Galicia	Moaña	
ALONG064-25	AORLON64	Spain	Galicia	Moaña	
ALONG065-25	AORLON65	Spain	Galicia	Moaña	
ALONG066-25	AORLON66	Spain	Galicia	Moaña	
ALONG067-25	AORLON67	Spain	Galicia	Moaña	
ALONG068-25	AORLON68	France	Normandy	Vauban basin, Le Havre	
ALONG069-25	AORLON69	France	Normandy	Vauban basin, Le Havre	
ALONG070-25	AORLON70	France	Normandy	Vauban basin, Le Havre	
ALONG071-25	AORLON71	France	Normandy	Vauban basin, Le Havre	
ALONG072-25	AORLON72	France	Normandy	Vauban basin, Le Havre	
ALONG073-25	AORLON73	France	Normandy	Vauban basin, Le Havre	
ALONG074-25	AORLON74	France	Normandy	Vauban basin, Le Havre	
ALONG075-25	AORLON75	France	Normandy	Vauban basin, Le Havre	
ALONG076-25	AORLON76	France	Normandy	Cherbourg	
ALONG077-25	AORLON77	France	Normandy	Cherbourg	
ALONG078-25	AORLON78	France	Normandy	Cherbourg	
ALONG079-25	AORLON79	France	Normandy	Cherbourg	
ALONG080-25	AORLON80	France	Normandy	Cherbourg	
ALONG081-25	AORLON81	France	Normandy	Cherbourg	
ALONG082-25	AORLON82	France	Normandy	Cherbourg	
ALONG083-25	AORLON83	France	Normandy	Cherbourg	
ALONG084-25	AORLON84	Japan	Osaka prefecture	Hakotsukuri, Hannan City	CO1, 16S
ALONG085-25	AORLON85	Japan	Osaka prefecture	Hakotsukuri, Hannan City	CO1, 16S
ALONG086-25	AORLON86	Japan	Osaka prefecture	Hakotsukuri, Hannan City	CO1, 16S
ALONG087-25	AORLON87	Japan	Osaka prefecture	Hakotsukuri, Hannan City	CO1
ALONG088-25	AORLON88	Japan	Osaka prefecture	Hakotsukuri, Hannan City	CO1
ALONG089-25	AORLON89	Japan	Osaka prefecture	Hakotsukuri, Hannan City	CO1
ALONG090-25	AORLON90	Japan	Osaka prefecture	Hakotsukuri, Hannan City	
ALONG091-25	AORLON91	France	Brittany	Marina du Château, Brest	16S

Continued

Table S3 continued

Process ID	Sample ID	Country	Region	Exact Site	Available sequences
ALONG092-25	AORLON92	France	Brittany	Marina du Château, Brest	16S
ALONG093-25	AORLON93	France	Brittany	Marina du Château, Brest	16S
ALONG094-25	AORLON94	France	Brittany	Marina du Château, Brest	
ALONG095-25	AORLON95	France	Brittany	Marina du Château, Brest	
ALONG096-25	AORLON96	France	Brittany	Marina du Château, Brest	
ALONG097-25	AORLON97	France	Brittany	Marina du Château, Brest	
ALONG098-25	AORLON98	France	Brittany	Marina du Château, Brest	
ALONG099-25	AORLON99	France	Brittany	Marina du Château, Brest	
ALONG100-25	AORLON100	France	Brittany	Marina du Château, Brest	
ALONG101-25	AORLON101	France	Brittany	Marina du Château, Brest	
ALONG102-25	AORLON102	Spain	Canary Islands	Garachico marina	CO1, 16S
ALONG103-25	AORLON103	France	Brittany	Roscoff marina	CO1, 16S
ALONG104-25	AORLON104	France	Brittany	Roscoff marina	CO1, 16S
ALONG105-25	AORLON105	France	Pays de la Loire	Piriac-sur-Mer marina	16S
ALONG106-25	AORLON106	France	Brittany	Trébeurden marina	CO1, 16S
ALONG107-25	AORLON107	France	Brittany	Saint Malo marina	16S

Accession number/Process ID/Sample ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1 JX545451.1_*Aoroides columbiae*		0.019	0.018	0.020	0.018	0.018	0.018	0.018	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.018	0.018	0.017
2 MG317304.1_*Aoroides* cf *columbiae*	0.181		0.002	0.019	0.018	0.018	0.018	0.018	0.019	0.019	0.019	0.019	0.018	0.018	0.018	0.018	0.018	0.019	0.019	0.020	0.016	0.016	0.016
3 MG936292.1_*Aoroides* cf *columbiae*	0.180	0.003		0.020	0.018	0.018	0.018	0.018	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.020	0.016	0.016	0.016
4 AORLON85	0.197	0.194	0.197		0.004	0.003	0.004	0.005	0.005	0.005	0.002	0.005	0.005	0.005	0.005	0.005	0.005	0.006	0.007	0.011	0.020	0.020	0.020
5 AORLON103	0.182	0.180	0.183	0.010		0.004	0.000	0.004	0.005	0.005	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.006	0.006	0.010	0.019	0.019	0.018
6 AORLON89	0.184	0.186	0.189	0.007	0.011		0.004	0.005	0.002	0.004	0.003	0.006	0.006	0.006	0.006	0.006	0.006	0.007	0.007	0.010	0.019	0.019	0.019
7 AORLON106	0.182	0.180	0.183	0.010	0.000	0.011		0.004	0.005	0.005	0.004	0.005	0.005	0.005	0.005	0.005	0.005	0.006	0.006	0.010	0.019	0.019	0.018
8 AORLON104	0.180	0.186	0.189	0.015	0.011	0.015	0.011		0.005	0.006	0.005	0.006	0.006	0.006	0.006	0.006	0.006	0.007	0.007	0.010	0.019	0.019	0.018
9 AORLON84	0.180	0.187	0.192	0.011	0.013	0.003	0.013	0.018		0.003	0.004	0.006	0.006	0.007	0.006	0.007	0.007	0.007	0.007	0.010	0.020	0.020	0.020
10 AORLON87	0.182	0.189	0.194	0.016	0.018	0.008	0.018	0.023	0.008		0.005	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.006	0.010	0.020	0.020	0.020
11 AORLON88	0.182	0.187	0.192	0.004	0.010	0.006	0.010	0.015	0.010	0.015		0.005	0.005	0.006	0.005	0.006	0.006	0.006	0.006	0.010	0.019	0.019	0.019
12 AORLON102	0.188	0.198	0.203	0.014	0.016	0.020	0.016	0.021	0.023	0.028	0.016		0.006	0.007	0.006	0.007	0.007	0.007	0.007	0.010	0.020	0.020	0.020
13 AORLON15	0.181	0.188	0.191	0.017	0.017	0.022	0.017	0.022	0.025	0.030	0.018	0.025		0.002	0.000	0.002	0.002	0.003	0.004	0.009	0.019	0.019	0.019
14 AORLON12	0.182	0.190	0.193	0.018	0.018	0.023	0.018	0.023	0.026	0.031	0.020	0.026	0.002		0.002	0.002	0.002	0.003	0.004	0.009	0.019	0.019	0.019
15 AORLON5	0.181	0.188	0.191	0.017	0.017	0.022	0.017	0.022	0.025	0.030	0.018	0.025	0.000	0.002		0.002	0.002	0.003	0.004	0.009	0.019	0.019	0.019
16 AORLON13	0.183	0.188	0.191	0.018	0.019	0.023	0.019	0.023	0.026	0.031	0.020	0.026	0.002	0.003	0.002		0.000	0.003	0.003	0.009	0.019	0.019	0.019
17 AORLON14	0.183	0.188	0.191	0.018	0.019	0.023	0.019	0.023	0.026	0.031	0.020	0.026	0.002	0.003	0.002	0.000		0.003	0.003	0.009	0.019	0.019	0.019
18 AORLON11	0.187	0.192	0.195	0.023	0.023	0.028	0.023	0.028	0.031	0.028	0.025	0.031	0.006	0.008	0.006	0.005	0.005		0.002	0.009	0.019	0.019	0.019
19 AORLON6	0.184	0.191	0.196	0.025	0.023	0.030	0.023	0.028	0.030	0.025	0.026	0.033	0.008	0.010	0.008	0.006	0.006	0.003		0.009	0.020	0.019	0.020
20 AORLON86	0.186	0.202	0.207	0.059	0.057	0.061	0.057	0.056	0.061	0.056	0.057	0.065	0.050	0.052	0.050	0.052	0.052	0.049	0.045		0.019	0.019	0.019
21 BCAMP255-08_*Aoroides intermedius*	0.165	0.139	0.139	0.197	0.185	0.191	0.185	0.185	0.198	0.200	0.196	0.207	0.187	0.189	0.187	0.189	0.189	0.193	0.197	0.195		0.000	0.002
22 BCAMP102-08_*Aoroides intermedius*	0.164	0.138	0.139	0.196	0.184	0.191	0.184	0.184	0.197	0.199	0.195	0.206	0.186	0.188	0.186	0.188	0.188	0.192	0.197	0.195	0.000		0.002
23 NJCGS736-10_*Aoroides intermedius*	0.165	0.137	0.137	0.200	0.186	0.195	0.186	0.186	0.195	0.197	0.193	0.205	0.190	0.192	0.190	0.192	0.192	0.196	0.197	0.195	0.002	0.002	

Table S4. Kimura 2 parameters pairwise distances of each specimen for CO1 sequences. Below the diagonal the pairwise distances, above the diagonal the standard errors after 999 permutations. In grey the comparisons of *Aoroides longimerus* Ren & Zheng, 1996 with the congeneric species.

Accession number/Sample ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 JX545420.1_*Aoroides columbiae*		0.011	0.017	0.017	0.017	0.016	0.017	0.017	0.016	0.017	0.017	0.016	0.017	0.016	0.015	0.016	0.016	0.016	0.014	0.019
2 JX545421.1_*Aoroides columbiae*	0.050		0.016	0.016	0.016	0.015	0.016	0.015	0.015	0.015	0.017	0.015	0.016	0.015	0.015	0.015	0.015	0.015	0.014	0.018
3 AORLON86	0.095	0.089		0.008	0.008	0.008	0.008	0.009	0.008	0.009	0.009	0.009	0.009	0.010	0.009	0.010	0.010	0.010	0.008	0.010
4 AORLON14	0.085	0.082	0.023		0.005	0.004	0.007	0.007	0.005	0.006	0.004	0.006	0.005	0.006	0.006	0.007	0.007	0.007	0.004	0.008
5 AORLON15	0.096	0.090	0.025	0.009		0.003	0.008	0.005	0.004	0.004	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.005	0.008
6 AORLON13	0.088	0.082	0.022	0.006	0.003		0.005	0.005	0.003	0.004	0.000	0.003	0.000	0.003	0.003	0.004	0.004	0.004	0.000	0.007
7 AORLON106	0.093	0.087	0.025	0.014	0.021	0.008		0.005	0.004	0.005	0.005	0.003	0.005	0.004	0.004	0.004	0.004	0.004	0.005	0.008
8 AORLON102	0.092	0.083	0.030	0.014	0.011	0.008	0.011		0.004	0.005	0.006	0.005	0.006	0.004	0.004	0.005	0.005	0.005	0.005	0.008
9 AORLON85	0.089	0.080	0.025	0.009	0.005	0.003	0.005	0.005		0.003	0.004	0.000	0.003	0.000	0.000	0.003	0.003	0.003	0.003	0.007
10 AORLON84	0.092	0.083	0.028	0.012	0.008	0.006	0.008	0.008	0.003		0.004	0.000	0.003	0.000	0.003	0.004	0.004	0.004	0.004	0.007
11 AORLON1	0.086	0.083	0.025	0.004	0.014	0.000	0.007	0.011	0.003	0.003		0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.000	0.009
12 AORLON107	0.083	0.077	0.026	0.010	0.016	0.003	0.003	0.006	0.000	0.000	0.003		0.004	0.000	0.000	0.000	0.000	0.000	0.003	0.008
13 AORLON2	0.086	0.083	0.024	0.007	0.013	0.000	0.007	0.010	0.003	0.003	0.003	0.006		0.004	0.004	0.004	0.004	0.004	0.003	0.009
14 AORLON91	0.085	0.079	0.029	0.010	0.015	0.003	0.006	0.006	0.000	0.000	0.003	0.000	0.006		0.000	0.000	0.000	0.000	0.003	0.008
15 AORLON92	0.081	0.078	0.028	0.010	0.015	0.003	0.006	0.006	0.000	0.003	0.003	0.000	0.006	0.000		0.000	0.000	0.000	0.003	0.008
16 AORLON93	0.084	0.081	0.031	0.013	0.018	0.006	0.006	0.009	0.003	0.006	0.003	0.000	0.006	0.000	0.000		0.000	0.000	0.004	0.008
17 AORLON103	0.083	0.080	0.031	0.013	0.018	0.006	0.006	0.009	0.003	0.006	0.003	0.000	0.006	0.000	0.000	0.000		0.000	0.004	0.008
18 AORLON104	0.083	0.080	0.030	0.013	0.018	0.006	0.006	0.009	0.003	0.006	0.003	0.000	0.006	0.000	0.000	0.000	0.000		0.004	0.008
19 AORLON16	0.079	0.074	0.022	0.006	0.011	0.000	0.011	0.008	0.003	0.005	0.000	0.003	0.003	0.003	0.003	0.005	0.005	0.005		0.009
20 AORLON105	0.114	0.108	0.036	0.020	0.024	0.019	0.024	0.022	0.016	0.019	0.024	0.019	0.023	0.022	0.024	0.024	0.024	0.023	0.029	

Table S5. Kimura 2 parameters pairwise distances of each specimen for 16S sequences. Below the diagonal the pairwise distances, above the diagonal the standard errors after 999 permutations. In grey the comparisons of *Aoroides longimerus* Ren & Zheng, 1996 with the congeneric species.