**Supplementary Tables**

Supplementary Table S1. Literature sources for maps, focussing on publications after the revision of *Jassa* by Conlan (1990). Prior to Conlan (1990), the taxonomic assignment of species was in a state of flux, leading to species being merged as forms of *J. falcata* by Sexton and Reid (1951), though this was not universally accepted. A question mark indicates that the identification requires confirmation as the record is outside the known geographic and/or depth range of the species, or there is strong likelihood that the identification is incorrect. In this case, the record has not been mapped unless the specimen was known or suspected to be aboard a boat or ship. Additional literature has been included to alert readers to potentially useful ecological information. Species names are abbreviated by their first three letters, in capitals. Possible alternative names are given in lower case letters surrounded by brackets. Some species of *Jassa* were recently transferred to other genera by Conlan (submitted) and so are not included here.

| **Source** | **Species** | **Region** |
| --- | --- | --- |
| Sexton & Reid’s (1951) interpretation of Walker (1904) | MAR | Sri Lanka |
| Pequegnat & Pequegnat (1968) | MAR, VAL | Gulf of Mexico |
| Barnard (1969) | MOR, MYE | Pacific U.S.A. |
| Moore (1973) | FAL | U.K. |
| Thurston (1974) | ING | South Georgia |
| Branch (1975) | FAL? (mar, sla, mor) | South Africa |
| Lowry & Bullock (1976) | FAL?, HER?, ING, *Jassa* spp. 1, 2 (alo, jus, thu, fen, kje) | Antarctica and Southern Ocean |
| Hager (1977) | FAL? (mar) | Atlantic U.S.A. |
| Branch & Grindley (1979) | FAL? (mar, sla, mor) | South Africa |
| Diviacco (1979) | MAR (confirmed) | Italy |
| [[1]](#footnote-1)Nair & Anger (1979); Nair (1980) | FAL, MAR, HER | Germany |
| Bellan (1980) | FAL? (mar, sla, mor, her) | France |
| Blankley (1982) | FAL? (alo, jus, thu, fen) | Marion Island |
| Bennett *et al.* (1983) | FAL? (mar, sla, mor) | South Africa |
| Hong (1983) | SLA (confirmed) | The Republic of Korea |
| Wakabara *et al.* (1983) | FAL? (val) | Brazil |
| Bellan-Santini & Ledoyer (1986) | FAL? (alo, jus, thu, fen) | Marion Island |
| Kaandorp (1986) | FAL | France |
| Ledoyer (1986) | FAL? (mor) | Madagascar |
| Fishelson & Haran (1986/87) | FAL? (mar, sla, mor) | Israel |
| Jacobi (1987) | FAL? (val) | Brazil |
| Pulfrich & Griffiths (1988) | FAL? (mar, sla, mor) | South Africa |
| Atta (1988) | MAR, FAL? (mar, sla, mor) | Egypt |
| Franz (1989), Franz & Mohamed (1989) | MAR | Atlantic U.S.A. |
| Myers (1989) |  |  |
| Duffy (1990) | FAL? (mar, val) | Atlantic U.S.A. |
| Gray *et al.* (1990) | MAR | Norway |
| Krapp-Schickel & Ruffo (1990) | *Jassa* sp. (mar) | Canary Islands |
| Gonzalez (1991) | MAR, SLA, FAL? (mar, sla) | Chile |
| Jażdżewski *et al.* (1991a,b) | THU, ING | Antarctica: King George Island |
| Lyons & Myers (1991) | HER | Jordan |
| Nelson & Demetriades (1992) | FAL? (mar, val) | Atlantic U.S.A. |
| Procaccini & Scipione (1992) | MAR | Italy |
| Cattrijisse *et al.* (1993) | MAR, FAL, PUS | Netherlands |
| d’Udekem d’Acoz (1993) | MAR, HER | Belgium |
| Krapp-Schickel (1993) | MAR | Italy |
| Lopes *et al.* (1993) | MAR, FAL, PUS | Azores |
| Taylor & Cole (1994) | *Jassa* spp. (mar, sla, jus, gru, har) | New Zealand |
| Xiangiu (1994) | FAL? (mar, sla, mor, kim, bor, sha) | China |
| Dubiaski-Silva & Masunari (1995) | FAL? (mar, sla, val) | Brazil |
| Nelson (1995) | FAL? (mar, val) | Atlantic U.S.A. |
| Platvoet & Pinkster (1995) | MAR, FAL, HER | Netherlands |
| Ulrich *et al.* (1995) | FAL? (mar, fal, her) | Germany |
| Whorff *et al.* (1995) | FAL? (mar, val) | Gulf of Mexico U.S.A. |
| Yasumoto & Nagasawa (1996) | MAR | Japan |
| Clancy (1997) | MAR | Atlantic U.S.A. |
| Clark (1997) | MAR | Atlantic U.S.A. |
| Conradi *et al.* (1997) | MAR | Spain |
| Dixon & Moore (1997) | MAR, FAL | UK |
| Tisch (1997) | MAR | Atlantic U.S.A. |
| Anderson *et al.* (1998) | FAL? (mar, sla, mor) | South Africa |
| Appadoo & Steele (1998) | *Jassa* spp. 1, 2 | Mauritius Island |
| González, L. (1998) | *Jassa* sp. (mar, sla, alo, jus, thu) | Chile |
| Jernakoff & Nielsen (1998) | *Jassa* sp. (mar, sla) | Australia |
| Lantzouni *et al.* (1998) | MAR | Greece |
| Myers (1989) | MAR | France, Yugoslavia |
| Adami & Gordillo (1999) | ALO | Argentina |
| Cartes & Sorbe (1999) | MAR? | Spain |
| Conradi & López-González (1999) | MAR | Spain |
| Cunha *et al.* (1999) | *Jassa* sp. (mar, sla, fal, her, lau) | Portugal |
| Currie *et al.* (1999) | MAR | Australia |
| Dauvin (1999) | MAR, FAL, HER, PUS | France |
| De Broyer & Rauschert (1999) | MAR, ALO, JUS, *Jassa* sp. (thu, fen, kje, ing) | Magellan Region, Antarctica |
| Pavia *et al.* (1999) | FAL | Sweden |
| Poore & Storey (1999) | MAR | Australia |
| San Vicente & Sorbe (1999) | MAR | Spain |
| Steele & Steele (1999) | FAL? (mar) | Atlantic Canada |
| Viejo (1999) | PUS | Spain |
| Allanson Frssaf *et al.* (2000) | FAL? (mar, sla, mor) | South Africa |
| Conradi *et al.* (2000) | MAR | Spain |
| Dailey *et al.* (2000) | *Jassa* spp. (mar, sla, mor, bor, sta, car, sha, mye) | Pacific U.S.A. |
| Hill (2000) | FAL | U.K. |
| Relini *et al.* (2000) | MAR | Italy |
| Ruiz *et al.* (2000) | MAR | Atlantic, Pacific U.S.A. |
| Clark & Caudill (2001) | MAR | Atlantic U.S.A. |
| Genzano (2001) | FAL? (mar, sla, val) | Argentina |
| Kocataş *et al.* (2001) | MAR | Cyprus |
| Nakaoka *et al.* (2001) | *Jassa* spp. (mar, sla, mor, kim, bor) | Japan |
| San Vicente & Sorbe (2001) | MAR | Spain |
| Sezgin *et al.* (2001) | MAR | Turkey |
| Wasson *et al.* (2001) | MAR | Pacific U.S.A. |
| Zdzitowiecki & Presler (2001) | ING | Antarctica: South Shetland Islands |
| Kurdziel & Knowles (2002) | MAR | Atlantic U.S.A. |
| Lowry (2001) | FAL?, *Jassa* sp. (mar, sla, mor, kim, bor, sha) | China |
| Coleman (2002) | FAL | U.K. |
| Norderhaug *et al.* (2002) | FAL | Norway |
| Ohji *et al.* (2002) | SLA | Japan |
| Sorbe *et al.* (2002) | MAR | Israel |
| Valério-Berardo & Flynn (2002) | MAR | Brazil |
| Vallarino *et al.* (2002) | FAL? (mar, sla, val) | Argentina |
| Yu *et al.* (2002) | SLA | The Republic of Korea |
| Jørgensen & Christie (2003) | FAL | Norway |
| Karez & Ludynia (2003) | MAR, FAL | Germany |
| Kitsos & Koukouras (2003) | MAR | Greece |
| Nikitik & Robinson (2003) | *Jassa* sp. (mar, sla, fal, her) | U.K. |
| Norderhaug *et al.* (2003) | FAL | Norway |
| Sano *et al.* (2003) | MAR, SLA | Japan |
| Smit *et al.* (2003) | FAL? (mar, sla, mor) | South Africa |
| Viejo & Åberg (2003) | *Jassa* sp. (mar, sla, fal, her) | U.K., Sweden |
| Wilber *et al.* (2003) | FAL? (mar) | Atlantic U.S.A. |
| Bunker (2004) | FAL | U.K. |
| Elías *et al.* (2004) | FAL? (mar, sla, val) | Argentina |
| Foster *et al.* (2004) | cf. MAR (val) | Atlantic U.S.A. |
| Hewitt *et al.* (2004) | MAR | Australia |
| Jeong *et al.* (2004) | SLA | The Republic of Korea |
| Moshchenko & Zvyagintsev (2004) | MAR | Russia |
| Norderhaug (2004) | FAL | Norway |
| Tanaka & Leite (2004) | SLA | Brazil |
| Yurdabak (2004) | MAR | Turkey |
| Alonso de Pina (2005) | MAR | Argentina, Uruguay |
| Chiesa *et al.* (2005) | ALO | Argentina |
| Genzano (2005) | FAL? (mar, sla, val) | Argentina |
| Munilla & Vicente (2005) | MAR, FAL | Spain |
| Norderhaug *et al.* (2005) | FAL | U.K. |
| Prato & Biandolino (2005) | MAR | Italy |
| Rivero *et al.* (2005) | FAL? (mar, sla, val) | Argentina |
| Robinson *et al.* (2005) | MAR, SLA, MOR | South Africa |
| Vader & Krapp (2005) | KJE | Falkland Islands |
| Armsby & Tisch (2006) | MAR | Atlantic U.S.A. |
| Inglis *et al.* (2006a) | MAR | New Zealand |
| Inglis *et al.* (2006b) | SLA | New Zealand |
| Inglis *et al.* (2006c) | SLA | New Zealand |
| Jeong *et al.* (2006) | SLA | The Republic of Korea |
| Lewis *et al.* (2006) | MAR | Australia |
| Lim & Park (2006) | SLA | The Republic of Korea |
| López-Gappa *et al.* (2006) | MAR, ALO, FAL? (mar, sla, val) | Argentina |
| Reichert & Buchholz (2006) | MAR, FAL | Germany |
| Yan *et al.* (2006) | *Jassa* sp. | China |
| Zintzen *et al.* (2006) | HER | Belgium |
| Jeong *et al.* (2007) | SLA | The Republic of Korea |
| Greene & Grizzle (2007) | MAR | Atlantic U.S.A. |
| Havermans *et al.* (2007) | HER | Belgium |
| Huang *et al.* (2007) | *Jassa* spp.? (ing) | Antarctica |
| LeCroy (2007) | MAR, VAL | Atlantic U.S.A., U.S. Gulf of Mexico |
| Lu *et al.* (2007) | MAR, SLA, STA | Pacific Canada |
| Ortíz, *et al.* (2007) | FAL? (mar, val) | Atlantic U.S.A., Gulf of Mexico |
| Rensel & Forster (2007) | MAR, *Jassa* spp. | Pacific U.S.A. |
| Scinto *et al.* (2007) | MAR | Italy |
| Sezgin and Katağan (2007) | MAR, FAL? (mar) | Black Sea |
| Inglis *et al.* (2008) | SLA | New Zealand |
| Ito *et al.* (2008) | SLA | Japan |
| Krapp *et al.* (2008) | SLA (as *J. cadetta*) | Italy |
| Lim *et al.* (2008) | MAR, MOR | The Republic of Korea |
| Zintzen *et al.* (2008) | HER | Belgium |
| Donahue *et al.* (2009) | MAR | Atlantic U.S.A. |
| Flynn & Valério-Berardo (2009) | SLA | Brazil |
| Griffiths *et al.* (2009) | MAR, SLA, MOR | South Africa |
| Guerra-García *et al.* (2009a) | MAR | Spain, Morocco |
| Guerra-García *et al.* (2009b) | MAR | Spain |
| LeCroy *et al.* (2009) | MAR? (val) | Atlantic U.S.A. & U.S. Gulf of Mexico |
| Pérez-Schultheiss (2009) | MAR | Chile |
| Strong *et al.* (2009) | FAL | Ireland |
| Vázquez-Luis *et al.* (2009) | MAR | Spain |
| Yu *et al.* (2009) | SLA | The Republic of Korea |
| Benali & Zahaf (2010) | FAL? (mar, sla, mor) | Algeria |
| Cacabelos *et al.* (2010) | *Jassa* spp. | Spain |
| Cangussu *et al.* (2010) | *Jassa* sp. (mar, sla, val) | Brazil |
| Cerrato *et al.* (2010) | FAL? (mar) | Atlantic U.S.A. |
| Chavanich *et al.* (2010) | FAL? (mar, mor, sla, kim) | The Republic of Korea |
| Cigliano *et al.* (2010) | MAR | Italy |
| Dauvin *et al.* (2010) | FAL | France |
| Dunham (2010) | *Jassa* sp. (mar, val) | Atlantic U.S.A. |
| El Bakali *et al.* (2010) | *Jassa* sp. | Morocco |
| Gartner (2010) | STA, *Jassa* sp. | Pacific Canada |
| Gittenberger *et al.* (2010) | MAR | Netherlands |
| Guerra-García *et al.* (2010) | MAR | Spain |
| Hiscock *et al.* (2010) | FAL | U.K. |
| Kerckhof *et al.* (2010a,b) | HER | Belgium |
| Krapp *et al.* (2010) | SLA (as *J. trinacriae*), *Jassa* sp. | Italy |
| Lin *et al.* (2010) | FAL? (mar, sla, mor, kim, bor, sha) | China |
| Moshchenko & Zvyagintsev (2010) | MAR | Russia |
| Pilgrim & Darling (2010) | MAR, SLA, STA, *Jassa* spp. | Atlantic & Pacific U.S.A. |
| Piola & Conwell (2010) | MAR, STA? (mar, sla) | New Zealand |
| Reubens *et al.* (2010) | HER | Belgium |
| Sánchez-Moyano & García-Asencio (2010) | FAL | Spain |
| Schückel *et al.* (2010) | MAR | Germany |
| Switzer (2010) | MAR, STA | Pacific Canada |
| Wada *et al.* (2010) | *Jassa* sp. (mar, sla, mor, kim, bor) | Japan |
| Wanless *et al.* (2010) | *Jassa* sp. (alo) | Tristan da Cunha |
| Beermann & Franke (2011) | FAL, HER, MAR | Germany |
| Carr *et al.* (2011) | MAR | Pacific U.S.A. |
| de Juan & Cartes (2011) | MAR | Spain |
| Doi *et al.* (2011) | MAR, SLA | Japan |
| Eilertsen *et al.* (2011) | FAL | Norway |
| Farrapeira *et al.* (2011) | FAL? (mar, sla, val) | Brazil |
| Flynn *et al.* (2011) | SLA | Brazil |
| González *et al.* (2011) | MAR | Chile |
| Griffiths *et al.* (2011) | MAR, SLA, MOR | South Africa |
| Ito *et al.* (2011) | SLA | Japan |
| Izquierdo & Guerra-Garcίa (2011) | MAR, SLA (as *J. cadetta*), FAL | Spain, Portugal |
| Krapp-Schickel *et al.* (2011) | SLA (*as J. cadetta*) | Spain |
| Leblanc *et al.* (2011) | FAL | France |
| Mead *et al.* (2011) | MAR, SLA, MOR | South Africa |
| Pacios *et al.* (2011) | MAR, *Jassa* sp. (mar, sla, mor, fal, her) | Spain |
| Park *et al.* (2011) | SLA | The Republic of Korea |
| Plaisance *et al.* (2011a,b) | *Jassa* sp. (val)[[2]](#footnote-2) | Hawaiian Islands |
| Ruiz *et al.* (2011) | MAR | Atlantic, Pacific U.S.A. |
| Soler-Hurtado & Guerra-García (2011) | MAR, *Jassa* spp. (mar, sla, mor, fal, her) | Spain, Portugal |
| Zagami *et al.* (2011) | ALO | Argentina |
| Whanpetch (2011) | *Jassa* sp. (mar, sla, mor, kim, bor) | Japan |
| Yamada *et al.* (2011) | *Jassa* spp. (mar, sla, mor, kim, bor) | Japan |
| Bakir (2012) | FAL? (sla, mor), MAR | Turkey |
| Bano & Kazmi (2012) | FAL? (mar, sla, mor, her) | Pakistan |
| Beermann & Franke (2012) | MAR, FAL, HER | Germany |
| Bouma & Lengkeek (2012) | MAR, HER | Netherlands |
| Duchêne (2012) | MAR | France |
| Guerra-García *et al.* (2012) | FAL, MAR | Spain, Portugal |
| Haska *et al.* (2012) | FAL? (mar) | Atlantic U.S.A. |
| Haupt *et al.* (2012) | SLA | South Africa |
| Jeong *et al.* (2012) | SLA | The Republic of Korea |
| Lewis & Anderson (2012) | *Jassa* sp. (mar, sla, mor, bor, sta, car, sha, mye) | Pacific U.S.A. |
| Long *et al.* (2012) | *Jassa* sp. (mar, val) | Atlantic U.S.A. |
| Marin Jarrin (2012) | *Jassa* spp. (mar, sla, mor, bor, sta, car, sha, mye) | Pacific U.S.A. |
| Marty-Rivera, M. (2012) | FAL? (mar) | Atlantic U.S.A. |
| Olson (2012) | MAR | Atlantic U.S.A. |
| Pinedo *et al.* (2012) | *Jassa* spp. (mar, sla, mor, fal, her) | Spain |
| Suwandy (2012) | MAR | New Zealand |
| Wichmann *et al.* (2012) | THU | Chile |
| Beermann & Purz (2013) | FAL, HER, MAR | Germany |
| Bloecher *et al.* (2013) | FAL | Norway |
| Bromley *et al.* (2013) | *Jassa* sp. (mar, sla, fal, her) | U.K. |
| Cabezas *et al.* (2013) | SLA (as *J. cadetta*) | Spain |
| Day (2013) | MAR | Atlantic U.S.A. |
| Degraer *et al.* (2013) | MAR, HER | Belgium |
| De Troch *et al.* (2013) | HER | Belgium |
| Di Camillo *et al.* (2013) | MAR | Italy |
| Hinojosa-Arango *et al.* (2013) | FAL | Ireland |
| Kim *et al.* (2013) | *Jassa* sp. (mar, mor, sla, kim) | The Republic of Korea |
| Krone *et al.* (2013) | *Jassa* spp. (mar, pus, fal, her) | Germany |
| Milne & Griffiths (2013) | MAR, SLA, MOR | South Africa |
| Mutlu & Ergev (2013) | FAL? (mar, sla, mor) | Turkey |
| Needles & Wendt (2013) | MAR, SLA | Pacific U.S.A. |
| Paz-Ríos & Ardisson (2013) | MAR? (val) | Gulf of Mexico |
| Raja *et al.* (2013) | *Jassa* sp. (mar, sla) | India |
| Reubens *et al.* (2013) | HER | Belgium |
| Rocha *et al.* (2013) Suppl. | MAR, SLA, FAL? (val) | Brazil |
| Sezgin & Çil (2013) | MAR | Turkey |
| Baeza-Rojano *et al.* (2014) | *Jassa* sp. (mar, sla, mor, fal, her) | Spain |
| Bakir & Katağan (2014) | MAR | Turkey |
| Brown & McCollin (2014) | MAR | U.K. |
| Beermann (2014) | FAL, HER, MAR | Germany |
| Coates *et al.* (2014) | HER | Belgium |
| Fernandez-Gonzalez *et al.* (2014) | MAR | Spain |
| Havenga (2014) | MAR, SLA | South Africa |
| LaFrance *et al.* (2014) | FAL? (mar) | Atlantic U.S.A. |
| McCollin & Brown (2014) | MAR | U.K. |
| Reubens *et al.* (2014a,b) | HER | Belgium |
| Riera *et al.* (2014) | MAR | Canary Islands |
| Vanagt & Faasse (2014) | MAR, HER | Netherlands |
| Almagro-Pastor *et al.* (2015) | MAR | Spain |
| Baeye & Fettweis (2015) | HER | Belgium |
| Beermann *et al.* (2015) | HER | Germany |
| Beermann & Boos (2015) | HER, MAR | Germany |
| Bloecher *et al.* (2015) | FAL | Norway |
| Chan *et al.* (2015) | MAR | Canada |
| Costa *et al.* (2015) | SLA | Brazil |
| de Abreu Calixto *et al.* (2015) | SLA | Brazil |
| Domènech *et al.* (2015) | *Jassa* spp. (mar, sla, mor, her, mon) | Spain |
| Gavira OʹNeill *et al.* (2015) | *Jassa* sp. (mar, sla, mor, her, mon) | Spain |
| Gonzalez-Silvera *et al.* (2015) | MAR | Spain |
| Gutow *et al.* (2015) | MAR | Germany |
| Mülayim *et al.* (2015a) | MAR | Turkey |
| Mülayim *et al.* (2015b) | MAR | Turkey |
| Nall *et al.* (2015) | MAR | U.K. |
| Navarro-Barranco *et al.* (2015) | SLA | Spain |
| Nishijima *et al.* (2015) | *Jassa* sp. (mar, sla, mor, kim, bor) | Japan |
| Rumbold *et al.* (2015) | SLA | Argentina |
| Stenberg *et al.* (2015) | MAR, FAL, HER | Denmark |
| Atalah *et al.* (2016) | *Jassa* sp. (mar, sla) | New Zealand |
| Balkis *et al.* (2016) | MAR | Turkey |
| Bueno *et al.* (2016) | SLA | Brazil |
| Derweduwen *et al.* (2016) | HER | Belgium |
| Fernandez-Gonzalez *et al.* (2016) | MAR | Spain |
| Fernandez-Leborans *et al.* (2016) | MAR, SLA | Spain |
| Kerckhof *et al.* (2016) | MAR | Belgium |
| Kinoshita & Matsumasa (2016) | *Jassa* sp. (mar, sla, mor, kim, bor) | Japan |
| Kostina & Tsurpalo (2016) | MAR | Russia |
| Pinnell (2016) | *Jassa* sp. (mar, sla, mor, bor, sta, car, sha, mye) | Pacific U.S.A. |
| Ponti *et al.* (2016) | MAR | Italy |
| Schaal *et al.* (2016) | FAL | France |
| Schejter *et al.* (2016) | ALO | Argentina |
| Schram *et al.* (2016) | *Jassa* sp. (thu, ing) | Antarctica |
| Valentine *et al.* (2016) | MAR | Atlantic U.S.A. |
| Choi *et al.* (2017) | FAL? (mar, mor, sla, kim) | The Republic of Korea |
| Çinar *et al.* (2017) | MAR | Turkey |
| Colson *et al.* (2017) | HER | Belgium |
| Davoult *et al.* (2017) | MAR | France |
| Demicheli (2017) | MAR | Uruguay |
| Faasse (2017) | *Jassa* sp. (mar, pus, fal, her) | Netherlands |
| Fernandez-Gonzalez & Sanchez-Jerez (2017) | MAR, SLA | Spain, Italy, Malta, Croatia, Greece & Tunisia |
| Gouillieux (2017) | SLA | France |
| Israel *et al.* (2017) | *Jassa* sp. (mar, fal) | Iceland |
| Jak & Glorius (2017) | MAR, FAL, HER, *Jassa* sp. (sla, pus) | North Sea |
| Kodama *et al.* (2017) | MOR | Japan |
| Lin *et al.* (2017) | FAL? (mar, sla, mor, kim, bor, sha) | China |
| Lobo *et al.* (2017) | MAR, PUS, FAL, HER, Jassa sp. | Portugal, North Sea |
| Martin (2017) | *Jassa* spp. (mar, sla, fal, her) | U.K. |
| Peters *et al.* (2017) | SLA | South Africa |
| Plicanti *et al.* (2017) | *Jassa* sp. (mar, sla, fal, her, lau) | Portugal |
| Raz-Guzmán & Soto(2017) | FAL? (val) | Mexico |
| Robinson *et al.* (2017) | MAR | South Africa |
| Rohde *et al.* (2017) | MAR | Germany |
| Roy & Nandi (2017) | MAR, FAL? (mar, sla) | India |
| Siqueira *et al.* (2017) | SLA | Brazil |
| Ventura *et al.* (2017) | MAR | Italy |
| White (2017) | MAR | Australia |
| Bonifazi *et al.* (2018) | SLA | Italy |
| Coolen *et al.* (2018) | HER | Netherlands |
| Craig *et al.* (2018) | MAR | Japan |
| Gavira-OʹNeill *et al.* (2018) | *Jassa* sp. (mar, sla, mor, fal, her) | Spain |
| Haberlin (2018) | *Jassa* sp. (mar, sla, fal, her) | Ireland |
| Leclerc & Viard (2018) | MAR | France |
| Lizarralde *et al.* (2018) | *Jassa* sp. (mar, sla, val, alo, jus) | Patagonia, Argentina |
| Miller *et al.* (2018) | MAR | Japan |
| Teagle *et al.* (2018) | *Jassa* spp. (fal, her) | UK |
| Woods *et al.* (2018) | SLA | New Zealand |
| Barrera-Oro *et al.* (2019) | *Jassa* sp. (ing)[[3]](#footnote-3) | King George Island, West Antarctica |
| Bernard *et al.* (2019) | HER, *Jassa* sp. (mar, pus, fal) | Netherlands |
| Bonifazi *et al.* (2019) | MAR, *Jassa* sp. (sla, mor, her, mon) | Italy |
| Bueno & Leite (2019) | SLA | Brazil |
| Coolen *et al.* (2019) | HER | Netherlands |
| Dauvin & Foveau (2019) | FAL | France |
| Elsayed & Dorgham (2019) | MAR | Egypt |
| Fofonoff *et al.* (2019) | MAR | Pacific U.S.A. and elsewhere |
| Geller *et al.* (2019) | MAR, SLA, *Jassa* sp. (mor, kim, bor) | Japan |
| Hamdy *et al.* (2019) | MAR | Egypt |
| Jacobucci *et al.* (2019) | SLA | Brazil |
| Jayachandran *et al.* (2019) | FAL? (mar, sla) | India |
| Kakkonen *et al.* (2019) | MAR | U.K. |
| Khammassi *et al.* (2019) | MAR | Tunisia |
| Luttikhuizen *et al.* (2019) | HER | North Sea |
| Machado *et al.* (2019) | SLA | Brazil |
| Mangano *et al.* (2019) | MAR | Italy |
| Marchini *et al.* (2019) | MAR | Italy |
| Martin *et al.* (2019) | *Jassa* sp. (mar, sla, val, alo, jus) | Patagonia, Argentina |
| Martínez-Laiz *et al.* (2019) | MAR, SLA | France, Italy, Greece & Turkey |
| Miller *et al.* (2019a) | MAR, SLA, CAR? STA? (mor, kim, bor) | Japan |
| Miller *et al.* (2019b) | MAR, SLA, STA? (mor, kim, bor) | Japan |
| Navarro-Barranco *et al.* (2019) | MAR, *Jassa* sp. (sla, mor, fal, her) | Spain |
| Peters *et al.* (2019) | MAR, SLA | South Africa |
| Rumbold (2019) | MAR | Argentina |
| Şensurat-Genç *et al.* (2019) | MAR | Turkey |
| Targusi *et al.* (2019) | MAR | Italy |
| Walls *et al.* (2019) | FAL, *Jassa* sp. (mar, sla, her) | Ireland |
| Zakhama-Sraieb (2019) | SLA | Tunisia |
| Castro *et al.* (2020) | MAR | Argentina |
| Kodama *et al.* (2020) | MOR | Japan |
| Sedano *et al.* (2020) | MAR | Spain |
| Shaban & Abdel-Gaid (2020) | *Jassa* sp. (mar, her) | Egypt |
| Dauvin *et al.* (2020) | HER | France |
| Ros *et al.* (2020) | SLA | Spain |
| Tempesti *et al.* (2020) | MAR, SLA | Italy |
| Winfield *et al.* (2021) | VAL, MAR?, MOR? | Gulf of Mexico |

Supplementary Table S2. Latitudinal transect on the Atlantic and Gulf of Mexico coasts of North America showing locations where the trans-hemispheric species of *Jassa* were found in natural habitats. Species names are abbreviated by their first three letters.

| **Collec-tion** | **Accession number and station** | **Major water body** | **Coun-try** | **Specific location** | **Co-ordinates** | **Source for co-ordin-ates** | **Collector** | **Collec-tion date** | **Substrate** | **Micro-habitat** | **Depth (m)** | **Temp (C)** | **Salinity (PSU)** | **Species** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CMN | NMC 9817 | NW Atlantic | Canada | Québec: Gaspé South: Grand R. | ~48°50′N, 64°29′W | Google | P. Brunel | 3 Aug. 1953 |  |  | 6 |  |  | MAR |
| CMN | 1954-152, W8, 4541 | NW Atlantic | Canada | Newfoundland: Campbells Creek Cove | 48°31ʹ31ʺN, 58°51ʹ25ʺW | CMN | E. L. Bousfield | 18 July 1954 | limestone bedrock and pebbles, wave exposed coast |  | LW | 12.4 |  | MAR |
| CMN | 1954-152, A20, 4545 | NW Atlantic | Canada | Newfoundland: Long Pond, SW of Topsail | 47°31ʹ6ʺN, 52°58ʹ39ʺW | CMN | E. L. Bousfield | 28 July 1954 | boulder, gravel beach |  | LW | 14.8 | 29.9 | MAR |
| CMN | cat. 14060 | NW Atlantic | Canada | Newfoundland: Argentia | ~47°18′N, 53°59′W﻿ | Google |  |  |  | from base of the barnacle *Balanus balanus*, 1ʺacross | LW |  |  | MAR |
| CMN | 1954-152, A4, 4542 | NW Atlantic | Canada | Newfoundland: Great Barrisway R. mouth | 47°07ʹ40ʺN, 54°04ʹ03ʺW | CMN | E. L. Bousfield | 14 Aug. 1954 | stone and boulder bar at mouth of stream |  | LW | 14.5 | 30.9 | MAR |
| CMN | 1954-152, B4, 4548 | NW Atlantic | Canada | Newfoundland: Burin Peninsula, 2 mi. NE of Grand Banks | 47°05ʹ32ʺN, 55°47ʹ38ʺW | CMN | E. L. Bousfield | 7 Aug. 1954 | dark rock cliffs with coarse gravel beaches |  | LW | 14.8 |  | MAR |
| CMN | 1954-152, C 28 | NW Atlantic | Canada | Nova Scotia: Cape Breton I.: Bay St. Lawrence: Deadmans Cove | 47°00ʹ04ʺN, 60°27ʹ57ʺW | CMN | E. L. Bousfield | 25 June 1954 | stony beach |  | LW | 14.5 | 29.6 | MAR |
| NMNH |  | NW Atlantic | Canada | Nova Scotia: Pt. of Cheticamp I. | ~46°38′ 16″ N, 61°00′ 32″ W | Google |  | 5 July 1917 |  |  | LW |  |  | MAR |
| CMN | 1969-156 | NW Atlantic | Canada | Prince Edward I.: E. side of Campbell Pt. | 46°28.9ʹN, 62°08.8ʹW | CMN | R. K. Lee | 9 July 1968 |  |  | LW |  |  | MAR |
| CMN | 1960-180, P6 | NW Atlantic | Canada | Prince Edward I.: Tracadie Harbour | 46°24ʹ12ʺN, 63°02ʹ09ʺW | CMN | E. L. Bousfield | 13 July 1960 | protected bay, sandy, debris |  | LW | 21+ |  | MAR |
| CMN | 60-180, P34 | NW Atlantic | Canada | Prince Edward I.: Annandale Wharf | 46°15ʹ30ʺN, 62°25ʹ22ʺW | CMN | E. L. Bousfield | 26 Juy 1960 | sand, eelgrass, *Fucus* |  | LW | 20.9 |  | MAR |
| CMN | 1962-166, A17 | NW Atlantic | Canada | Nova Scotia: Cape Breton I.: Lingan Harbour: mouth of estuary | 46°13ʹ43ʺN, 60°02ʹ36ʺW | CMN | E. L. Bousfield | 17 July 1962 | surf, sand, stones, detritus, eelgrass, *Chorda* |  | LW | 13.1 | 25.1 | MAR |
| CMN | 60-180, P2 | NW Atlantic | Canada | Prince Edward I.: Keppoch Beach | 46°11ʹ35ʺN, 63°06ʹ11ʺW | CMN | E. L. Bousfield | 10 July 1960 | pure sand, Fucus, cord grass, sandstone |  | LW | 19.2 |  | MAR |
| CMN | 1954-152, C14 | NW Atlantic | Canada | Nova Scotia: Cape Breton County: 3 mi. NE of Morien Bay | 46°10ʹ04ʺN, 59°50ʹ26ʺW | CMN | E. L. Bousfield | 3 July 1954 | sandstone and gravel shore |  | LW | 12.7 | 30.5 | MAR |
| CMN | 60-180, P29 | NW Atlantic | Canada | Prince Edward I.: Lower Murray Harbour | 46°00ʹ56ʺN, 62°29ʹ28ʺW | CMN | E. L. Bousfield | 25 July 1960 | sandy, muddy sand, eelgrass. Good tidal currents. Rich offal from fish plant neaby |  | LW | 20.4 |  | MAR |
| CMN | 1954-152, C11 | NW Atlantic | Canada | Nova Scotia: Cape Breton County: head of Mira Bay | 46°00ʹ51ʺN, 59°57ʹ21ʺW | CMN | E. L. Bousfield | 5 July 1954 | mouth of saltwater pond |  | LW | 18.6 | 30.5 | MAR |
| CMN | 1962-166, A26 | NW Atlantic | Canada | Nova Scotia: Bourgeois Inlet: inside mouth | 45°37ʹ36ʺN, 60°56ʹ51ʺW | CMN | E. L. Bousfield | 20 July 1962 | stones, algae |  | 7 |  |  | MAR |
| CMN | 1962-166, A18 | NW Atlantic | Canada | Nova Scotia: Point Michaud Beach: NE end | 45°35ʹ30ʺN, 60°40ʹ44ʺW | CMN | E. L. Bousfield | 18 July 1962 | rock, flat sand, fucoids |  | LW | 13.2 | 29 | MAR |
| CMN | 1962-166, A21 | NW Atlantic | Canada | Nova Scotia: Cape Breton I.: L'Ardoise Beach, Bay | 45°34ʹ59ʺN, 60°44ʹ21ʺW | CMN | E. L. Bousfield | 19 July 1962 | sand and mud flats, eelgrass, filamentous algae on stones |  | LW | 14.4 | 25.3 | MAR |
| CMN | 1962-166, A30 | NW Atlantic | Canada | Nova Scotia: Pondville Beach: Bay of Rocks | 45°31ʹ58ʺN, 60°58ʹ39ʺW | CMN | E. L. Bousfield | 20 July 1962 | bedrock, stones, sand, fucoids, *Lithothamnion* |  | LW | 14.1 | 29.7 | MAR |
| CMN | 1954-152, C1 | NW Atlantic | Canada | Nova Scotia: Luneburg County: Richmond County: Janvrin l. | 45°31ʹ11ʺN, 61°10ʹ39ʺW | CMN | E. L. Bousfield | 30 June 1954 | outer shore, stone and boulder beach |  | LW | 16 | 30.4 | MAR |
| CMN | 1962-166, A42 | NW Atlantic | Canada | Nova Scotia: Oyster Ponds: outer shore | 45°27ʹ21ʺN, 61°16ʹ20ʺW | CMN | E. L. Bousfield | 23 July 1962 | stones, pebbles, coarse sand patches |  | LW | 15.1 |  | MAR |
| CMN | 1962-166, A48 | NW Atlantic | Canada | Nova Scotia: Charles Cove: west of bar | 45°14ʹ22ʺN, 61°20ʹ00ʺW | CMN | E. L. Bousfield | 24 July 1962 | sandy mud, granite boulders, fucoids, eelgrass |  | LW | 13.5 | 29.7 | MAR |
| CMN | 1962-166, A44 | NW Atlantic | Canada | Nova Scotia: Deming I.: Whitehead Harbour: Marshall Cove | 45°12ʹ45ʺN, 61°10ʹ27ʺW | CMN | E. L. Bousfield | 23 July 1962 | bedrock, Ascophyllum, Fucus |  | LW | 11.5 |  | MAR |
| CMN | 1962-166, A68 | NW Atlantic | Canada | Nova Scotia: Moosehead: White Island Bay | 44°56ʹ30ʺN, 62°15ʹ57ʺW | CMN | E. L. Bousfield | 1 Aug. 1962 | sand, stones, eelgrass, at stream mouth |  | LW | 16.4 | 22.4 | MAR |
| CMN | 1962-166, A61 | NW Atlantic | Canada | Nova Scotia: East Quoddy Pond: inlet bridge | 44°54ʹ39ʺN, 62°18ʹ55ʺW | CMN | E. L. Bousfield | 30 July 1962 | stones, shells, mud, kelp, eelgrass |  | LW | 18.9 | 29.8 | MAR |
| CMN | 1958-84, W3 | NW Atlantic | Canada | Nova Scotia: Cape St. Mary | 44°05ʹ02ʺN, 66°12ʹ27ʺW | CMN | E. L. Bousfield | 13 July 1958 | exposed coast, vertical slate | in *Chondrus* | LW | 12.5 |  | MAR |
| CMN | 1962-166, A73 | NW Atlantic | Canada | Nova Scotia: Psyche Cove: south end | 44°48ʹ29ʺN, 62°33ʹ34ʺW | CMN | E. L. Bousfield | 2 Aug. 1962 | fine sand, pebbles, bedrock. filamentous algae, chord grass |  | LW | 14.8 | 28.2 | MAR |
| CMN | 1962-166, A12 | NW Atlantic | Canada | Nova Scotia: Clam Harbour Beach | 44°43ʹ05ʺN, 62°52ʹ49ʺW | CMN | E. L. Bousfield | 12 July 1962 | surf exposed fine sand, igneous bedrock, high water pools |  | LW | 13.1 | 25.1 | MAR |
| CMN | 1962-166, A10 | NW Atlantic | Canada | Nova Scotia: Martinique Beach | 44°41ʹ19ʺN, 63°08ʹ42ʺW | CMN | E. L. Bousfield | 11 July 1962 | boulders, fine sand, high water rock pools |  | LW | 11.6 | 29.1 | MAR |
| CMN | 9812, H9 | NW Atlantic | Canada | Nova Scotia: Cole Harbour | 44°39ʹ14ʺN, 63°25ʹ27ʺW | CMN | E. L. Bousfield | 30 June 1956 | shallow, cold, sand and sndy around bay. Fauna in high salinity and cold temperature |  | LW |  |  | MAR |
| CMN | 13126, H10 | NW Atlantic | Canada | Nova Scotia: Three Fathom Harbour | 44°38ʹ49ʺN, 63°16ʹ46ʺW | CMN | E. L. Bousfield | 24 July 1956 | reducing mud, coarse sand, pebbles. Polluted with fish heads, etc. Practically no wave action |  | LW | 15.5 | 30 | MAR |
| CMN | 1956-81, H1 | NW Atlantic | Canada | Nova Scotia: Black Pt. | 44°38ʹ38ʺN, 63°58ʹ55ʺW | CMN | E. L. Bousfield | 17 July 1956 | boulders, *Fucus, Ascophyllum*. Beach at point. Restricted wave shock |  | LW | 16.9 |  | MAR |
| CMN | 13131, L6 | NW Atlantic | Canada | Nova Scotia: Graves I. | 44°33ʹ32ʺN, 64°12ʹ35ʺW | CMN | E. L. Bousfield | 26 July 1956 | protected sand, coarse granite boulders and pebbles. Shallow, island studded, wooded bay |  | LW | 19.2 | 30.4 | MAR |
| CMN | 9813, L9 | NW Atlantic | Canada | Nova Scotia: South West Cove | 44°31ʹ27ʺN, 64°00ʹ36ʺW | CMN | E. L. Bousfield | 25 July 1956 | coarse granite, coarse sand. Little wave action | from rocks | LW | 18.8 | 29.9 | MAR |
| CMN | 1963-293, M23 | NW Atlantic | U.S.A | Maine: Damariscotta R estuary | 44°26ʹ13ʺN, 68°17ʹ26ʺW | CMN | E. L. Bousfield | 23 July 1963 | mud, muddy sand, boulders, rich algal cover with kelp |  | LW |  |  | MAR |
| CMN | 9821, L4 | NW Atlantic | Canada | Nova Scotia: Spindlers Cove | 44°19ʹ33ʺN, 64°16ʹ02ʺW | CMN | E. L. Bousfield | 10 July 1956 | black sand beach. Low water collection on black vertical slate at and in *Chondrus crispus* zone |  | LW | 11.6 | 30.7 | MAR |
| CMN | 1954-152, S2 | NW Atlantic | Canada | Nova Scotia: Luneburg County: Green Bay | 44°12ʹ52ʺN, 64°26ʹ11ʺW | CMN | E. L. Bousfield | 20 June 1954 | sand, pebble and rock beaches |  | LW |  |  | MAR |
| CMN | 1963-293, M34 | NW Atlantic | U.S.A | Maine: Damariscotta Salt Pond, 1 mi. above Newcastle | 44°02ʹ32ʺN, 69°31ʹ52ʺW | CMN | E. L. Bousfield | 23 July 1963 | thick mud, *Ruppia,* salt grasses, eelgrass debris |  |  |  |  | MAR |
| CMN | 1963-293, M33 | NW Atlantic | U.S.A | Maine: Damariscotta R: at town bridge | 44°02ʹ00ʺN, 69°32ʹ01ʺW | CMN | E. L. Bousfield | 23 July 1963 | boulders, mud, Chondrus |  | LW | 22 |  | MAR |
| CMN | 1963-293, M32 | NW Atlantic | U.S.A | Maine: Greenland Cove: Sylvester Pond | 43°59ʹ50ʺN, 69°25ʹ26ʺW | CMN | E. L. Bousfield | 22 July 1963 | fine mud, stones, rock, algae |  | LW | 22.3 |  | MAR |
| CMN | 1963-293, M28 | NW Atlantic | U.S.A | Maine: Damariscotta R: at town bridge | 43°52ʹ11ʺN, 69°31ʹ07ʺW | CMN | E. L. Bousfield | 21 July 1963 | coarse sand and pebbles, bedrock, *Chondrus* debris |  | LW | 17.1 |  | MAR |
| CMN | 1963-293, M37 | NW Atlantic | U.S.A | Maine: East Boothbay: Ocean Point | 43°48ʹ47ʺN, 69°35ʹ49ʺW | CMN | E. L. Bousfield | 24 July 1963 | bedrock, *Fucus* and *Chondrus* type |  | LW | 15.3 |  | MAR |
| CMN | 9810, S18 | NW Atlantic | Canada | Nova Scotia: Jones Harbour | 43°44ʹ59ʺN, 64°58ʹ32ʺW | CMN | E. L. Bousfield | 14 July 1956 | boulders. Protected and little wave action |  | LW | 13 | 29.9 | MAR |
| NMNH | 53131 | NW Atlantic | U.S.A | Maine: Casco Bay, S. of Haddock Rock | ~43°42ʹN 70°02ʹW | Google |  | 15 Aug. no year |  |  | 9-13 m |  |  | MAR |
| CMN | 9811, Y8 | NW Atlantic | Canada | Nova Scotia: Abbott Harbour | 43°39ʹ41ʺN, 65°49ʹ15ʺW | CMN | E. L. Bousfield | 11 July 1956 | boulders, *Chondrus, Laminaria, Zostera* zone |  | LW | 12.9 | 30.1 | MAR |
| CMN | 1963-293, M44 | NW Atlantic | U.S.A | Maine: Cape Elizabeth | 43°33ʹ29ʺN, 70°12ʹ19ʺW | CMN | E. L. Bousfield | 26 July 1963 | Exposed coast with pounding surf. Bedrock |  | LW | 16.2 |  | MAR |
| CMN | 1963-293, M48 | NW Atlantic | U.S.A | Maine: Pine Point: fish wharf | 43°32ʹ41ʺN, 70°20ʹ0ʺW | CMN | E. L. Bousfield | 28 July 1963 | sand of various grades, muddy sand, mussel shells |  | LW | 22+ |  | MAR |
| CMN | 9813, S1 | NW Atlantic | Canada | Nova Scotia: Lower Woods Harbour | 43°30ʹ11ʺN, 65°44ʹ01ʺW | CMN | E. L. Bousfield | 12 July 1956 | boulder, pebble and bedrock beach. Probably not much wave action |  | LW | 10.9 | 30.4 | MAR |
| CMN | 1963-293, M51 | NW Atlantic | U.S.A | Maine: Kennebunkport: cove E of Walker's Point | 43°20ʹ43ʺN, 70°27ʹ38ʺW | CMN | E. L. Bousfield | 31 July 1963 | bedrock, fucoids, *Chondrus* |  | LW | 14.8 |  | MAR |
| CMN | 1963-293, M52 | NW Atlantic | U.S.A | Maine: Mousam R. estuary, at mouth | 43°20ʹ42ʺN, 70°30ʹ58ʺW | CMN | E. L. Bousfield | 31 July 1963 | warm brackish, variable sandy bottom |  | LW | 17.3 |  | MAR |
| CMN | 1963-293, M62 | NW Atlantic | U.S.A | New Hampshire: Little Harbour: mouth of Piscataque R. | 43°03ʹ27ʺN, 70°43ʹ46ʺW | CMN | E. L. Bousfield | 5 Aug. 1963 | mud, muddy sand, boulders, rich algal cover with kelp |  | LW | 15 |  | MAR |
| CMN | 1963-293, M59 | NW Atlantic | U.S.A | New Hampshire: Seabrook Beach at Beckmans Point | 42°53ʹ29ʺN, 70°48ʹ41ʺW | CMN | E. L. Bousfield | 3 Aug. 1963 | surf exposed, coarse variable sand |  | LW | 17.1-19.5 |  | MAR |
| CMN | 1963-293, M66 | NW Atlantic | U.S.A | Massachusetts: Rockport | 42°39ʹ38ʺN, 70°37ʹ18ʺW | CMN | E. L. Bousfield | 6 Aug. 1963 | boulders and bedrock |  | LW | 15.4 | 31.7 | MAR |
| CMN | 1963-293, M68 | NW Atlantic | U.S.A | Massachusetts: Magnolia Beach: Cape Ann | 42°34ʹ33ʺN, 70°42ʹ57ʺW | CMN | E. L. Bousfield | 7 Aug. 1963 | fine white sand, reducing at end, boulders, bedrock, fucoids on boulders |  | LW | 14.6 |  | MAR |
| CMN | 1963-293, M78 | NW Atlantic | U.S.A | Massachusetts: N. Weymouth | 42°15ʹ02.3ʺN,  70°56ʹ46ʺW | CMN | E. L. Bousfield | 12 Aug. 1963 | sandy silt, stones, *Ulva, Chondrus* |  | LW | 20.4 |  | MAR |
| CMN | 1963-293, M71 | NW Atlantic | U.S.A | Massachusetts: Marshfield Salt Pond: W of Brant Rock at highway gates | 42°05ʹ10ʺN, 70°39ʹ4ʺW | CMN | E. L. Bousfield | 7 Aug 1963 | warm, high brackish pond separated at roadway by flood gates and a 1.5 ft high water sill |  | edge of pond |  |  | MAR |
| CMN | 1963-293, M72 | NW Atlantic | U.S.A | Massachusetts: Brant Rock: trailer camp store | 42°04ʹ53ʺN, 70°38ʹ19ʺW | CMN | E. L. Bousfield | 8 Aug. 1963 | wave and surf exposed bedrock, boulders, gravel, sand, Chorda |  | LW | 13.8 |  | MAR |
| CMN | 1963-293, M74 | NW Atlantic | U.S.A | Massachusetts: Warren Cove: at beach park | 41°56ʹ31ʺN, 70°37ʹ15ʺW | CMN | E. L. Bousfield | 9 Aug. 1963 | sand, boulders, mud |  | LW | 15 |  | MAR |
| CMN | 1963-293, M76 | NW Atlantic | U.S.A | Massachusetts: Cape Cod Bay: S side of canal | 41°46ʹ30ʺN, 70°29ʹ39ʺW | CMN | E. L. Bousfield | 10 Aug. 1963 | coarse sand, pebbles, stones, Chorda, Zostera |  | LW | 15.6-17.5 |  | MAR |
| CMN | 1963-359, W13 | NW Atlantic | U.S.A | Massachusetts: Nobscusset Beach | 41°45ʹ08ʺN, 70°11ʹ20ʺW | CMN | E. L. Bousfield | 9 Sept. 1963 | fine sand, debris, rocks, stones, algae, *Spartina* roots |  | LW | 16 |  | MAR |
| CMN | 1963-293, M77 | NW Atlantic | U.S.A | Massachusetts: East Sandwich Beach: at inlet mouth | 41°44ʹ52ʺN, 70°25ʹ43ʺW | CMN | E. L. Bousfield | 11 Aug. 1963 | Outer part. Sand, pebbles, gravel, *Chorda* |  | LW | 19.4-23 |  | MAR |
| CMN | 1963-359, W10 | NW Atlantic | U.S.A | Massachusetts: Follins Pond: E end | 41°42ʹ23ʺN, 70°10ʹ40ʺW | CMN | E. L. Bousfield | 4 Sept. 1963 | coarse sand, eelgrass, plant debris, *Ulva*?, *Cladophora* |  | LW | 21 |  | MAR |
| CMN | 1963-359, W11 | NW Atlantic | U.S.A | Massachusetts: Little Sippewisset Marsh | 41°34ʹ36ʺN, 70°38ʹ25ʺW | CMN | E. L. Bousfield | 8 Sept. 1963 | sand (various), pebbles, *Sargassum* and fucoids |  | LW | 18.1 |  | MAR |
| CMN | 1963-359, W1 | NW Atlantic | U.S.A | Massachusetts: Woods Hole Passage: E end of Devil's Foot I. | 41°31ʹ17.5ʺN,  70°40ʹ47ʺW | CMN | E. L. Bousfield | 31 Aug. 1963 | Strong currents. Boulders, gravel, coarse sand, *Zostera, Fucus, Sargassum*, filamentous algae |  | LW | 21 |  | MAR |
| CMN | 1964-262, C11 | NW Atlantic | U.S.A | Massachusetts: Nantucket Harbour: Coatue Pt. | 41°17ʹ37ʺN, 70°04ʹ43ʺW | CMN | E. L. Bousfield | 18 Sept. 1964 | very coarse sand, shell, eelgrass |  | LW |  |  | MAR |
| NMNH | 166913 | NW Atlantic | U.S.A | Virginia: Chesapeake Bay: 3 mi. W of Cape Henry | ~37°48′N, 76°06′W | Google | L. Hubricht | 8 Aug. 1943 |  | algae |  |  |  | MAR |
| CMN | 1976-117, station 76.03.01921 | NW Atlantic | U.S.A | North Carolina: Duck | ~36°10ʹN, 75°45ʹE | Google | J. Matta | 1976 | ocean beach |  |  |  |  | MAR |
| CMN | 1965-93, C21 | NW Atlantic | U.S.A | North Carolina: Fort Macon: Branfort Inlet | 34°41ʹ53ʺN, 76°40ʹ37ʺW | CMN | E. L. Bousfield | 29 Apr. 1965 |  | on surf swept rocks | LW | 17.2 |  | MAR, VAL |
| NMNH | 133/586 | NW Atlantic | U.S.A | Georgia: 11 mi. off coast of Sapelo I. | ~31°30ʹN, 80°54ʹW | Google |  | 13 Mar. 1935 |  | on seaweed |  |  |  | VAL |

Supplementary Table S3. Latitudinal transect on the Atlantic and Gulf of Mexico coasts of North America showing locations where the trans-hemispheric species of *Jassa* were found in artificial habitats. Species names are abbreviated by their first three letters.

| **Collec-tion** | **Accession number and station** | **Major water body** | **Coun-try** | **Specific location** | **Co-ordinates** | **Source for co-ordin-ates** | **Collector** | **Collec-tion date** | **Substrate** | **Micro-habitat** | **Depth**  **(m)** | **Temp (C)** | **Salin-ity (PSU)** | **Species** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CMN | 1954-152 | NW Atlantic | Canada | Nova Scotia: Mahone Bay | ~44°26′ 56″ N,  64°22ʹ55″ W | Google | E. L. Bousfield | 6 July 1950 | buoy |  |  |  |  | MAR |
| CMN | 50-58, cat. 4532 | NW Atlantic | Canada | Nova Scotia: Port Maitland bell buoy | ~43°58ʹ55ʺN,  66°08ʹ49ʺW | Google | E. L. Bousfield | 25 June 1950 | bell buoy |  | shallow  subtidal |  |  | MAR |
| CMN | 1963-293, M64 | NW Atlantic | U.S.A | Massachussets: Castle Neck Estuary, E side of mouth | 42°39ʹ50ʺN, 70°43ʹ10ʺW | CMN | E. L. Bousfield | 5 Aug. 1963 | on lobster trap |  | subtidal | 18.1 |  | MAR |
| NMNH |  | NW Atlantic | U.S.A | Massachusetts: Cohasset | ~42°14ʹ30ʺN,  70°48ʹ13ʺW | Google | O. Bryant | 20 Sept. 1907 | on clam car |  | shallow  subtidal |  |  | MAR |
| CMN | 1963-359, W20 | NW Atlantic | U.S.A | Massachusetts: Falmouth: Green Pond at mouth | 41°32ʹ52ʺN, 70°34ʹ15ʺW | CMN | E. L. Bousfield | 14 Sept. 1963 | breakwater | on granite blocks | LW | 16.2 |  | MAR |
| NMNH |  | NW Atlantic | U.S.A | Connecticut: New Haven | ~41°17ʹ60ʺN,  72°54ʹ00ʺW | Google |  | 29 Sept. 1890 | on tide guage box |  |  |  |  | MAR |
| CMN | IZ1984-112 | NW Atlantic | U.S.A | New York: Brooklyn: Jamaica Bay Wildlife Refuge: Barren Island Marina | 40°35′N,  73°55′W﻿ | Conlan (1990) | K. E. Conlan | July 1984 | floating dock | on *Ulva* and hydroids | shallow  subtidal |  |  | MAR |
| CMN | IZ1986-057, NY-1 | NW Atlantic | U.S.A | New York: Brooklyn: Jamaica Bay Wildlife Refuge: Barren Island Marina | 40°35′N,  73°55′W﻿ | Conlan (1990) | K. E. Conlan | 25 June 1986 | floating dock | on *Ulva* and hydroids | shallow  subtidal |  |  | MAR |
| CMN |  | NW Atlantic | U.S.A | New Jersey: Cape May County: Avalon | ~39°06ʹN, 74°42ʹ W | Google | G. A. Schultz | 25 April 1976 | under rocks on jetty |  |  |  |  | MAR |
| CMN | VIMS Invert. CollʹN 1411 | NW Atlantic | U.S.A | Virginia: Virginia Institute of Marine Science pier, York R. | ~37°14ʹ58ʺN,  76°30ʹ03ʺW | Google |  | 28 Aug. 1965 | pier | on hydroid *Plumularia diphata* | shallow  subtidal |  |  | MAR |
| NMNH | 117208 | NW Atlantic | U.S.A | Virginia: Grand View Beach near Fort Monroe | ~37°00′ 13″ N 76 °18′ 27″ W﻿ | Google | C. R. Shoemaker | 18 Nov. 1931 | old pile on beach |  |  |  |  | MAR |
| CMN | 1975-93, C34 | NW Atlantic | U.S.A | North Carolina: Hatteras Inlet: N end of Ocracoke I. at ferry wharf | 35°11ʹ29ʺN, 75°46ʹ42ʺW | CMN | E. L. Bousfield | 14 Apr. 1975 | wharf pilings |  | LW | 14 | 32+ | MAR |
| CMN | 1960-267, cat. 6073 | NW Atlantic | U.S.A | North Carolina: Beaufort RRP.45 | ~34°43′N, 76°39′W | Google | E. Schmitz | 14 Aug. 1959 | railroad pilings |  |  |  |  | VAL |
| CMN | 1975-93, C12 | NW Atlantic | U.S.A | North Carolina: Radio I. channel jetty | 34°42ʹ24ʺN, 76°40ʹ44ʺW | CMN | E. L. Bousfield | 6 April 1975 | jetty |  |  |  |  | MAR, VAL |
| CMN |  | NW Atlantic | U.S.A | North Carolina: Radio I. jetty | 34°42ʹ24ʺN, 76°40ʹ44ʺW | CMN | E. L. Bousfield | 28 Jan. 1975 | jetty |  |  |  |  | VAL |
| CMN | 1975-93, C14 | NW Atlantic | U.S.A | North Carolina: 0.5 mi. from E end of Beaufort city limits: Taylor Creek | 34°42ʹ42ʺN, 76°39ʹ00ʺW | CMN | E. L. Bousfield | 9 Apr. 1975 | wharf pilings |  | LW | ~14 | ~32 | VAL |
| CMN | 1960-267, cat. 5674 | NW Atlantic | U.S.A | North Carolina: Fort Macon State Park | ~34°41′ 44″ N 76°41′ 20″ W | Google | E. Schmitz | 14 Aug. 1959 | jetty |  |  |  |  | VAL |
| NMNH | 132/978 | NW Atlantic | U.S.A | South Carolina: Charleston Harbor | ~‎32°47′ 05″ N 79°55′ 26″ W﻿ | Google | G. R. Lunz, Jr. | 29 Jan. 1935 | sea buoy |  | shallow  subtidal |  |  | VAL |
| CMN | NMC 12157 | NW Atlantic | U.S.A | Georgia: N. end of Jekyll I.: St. Simons Sound | ~31°04′N,  81°25′W | Google |  | 20 Jan. 1969 | jetty | on submerged oyster basket |  |  |  | VAL |
| CMN | 1966-211, G18, 2492 | Gulf of Mexico | U.S.A | Florida: Panama City Beach | 30°11ʹ22ʺN, 85°49ʹ53ʺW | CMN | E. L. Bousfield | 20 April 1966 | wharf piling |  | LW | 21 | 33+ | MAR |
| CMN | 1966-291 | Gulf of Mexico | U.S.A | Florida: Bay County: St. Andrews Bay: ~400 yards NW jetty | ~30°N, 85°W | Google | E. L. Bousfield | 2 May 1964 | jetty | on shells suspended from jetty | ~1 |  |  | VAL |
| CMN | 1966-291 | Gulf of Mexico | U.S.A | Florida: Bay County: St. Andrews Bay: ~400 yards inside W jetty | ~30°N, 85°W | Google | E. L. Bousfield | 7 Feb. 1965 | jetty |  |  |  |  | VAL |
| TAMU loan | P259, F-2U, i-73 | Gulf of Mexico | U.S.A | Florida: 2 mi. off Panama City | 30°07.2ʹN, 85°46.5ʹW | TAMU | L. Pequegnat | 28 Dec. 1964 | settling float |  | 4 |  |  | VAL |
| TAMU loan | P450, F-2, i-211 | Gulf of Mexico | U.S.A | Florida: 2 mi. off Panama City | 30°07.2ʹN, 85°46.5ʹW | TAMU | L. Pequegnat | 20 June 1965 | settling float |  | 4 |  |  | VAL |
| TAMU loan | P114, F-2U, i-60 | Gulf of Mexico | U.S.A | Florida: 2 mi. off Panama City | 30°07.2ʹN, 85°46.5ʹW | TAMU | L. Pequegnat | 20 Sept. 1964 | settling float |  | 4 |  |  | VAL |
| TAMU loan | P-4, F-2U, I-55 | Gulf of Mexico | U.S.A | Florida: 2 mi. off Panama City | 30°07.2ʹN, 85°46.5ʹW | TAMU | L. Pequegnat | 22 Aug. 1964 | untreated fouling plate |  | 4 |  |  | VAL |
| TAMU loan | P-320, F-2U, i-71 | Gulf of Mexico | U.S.A | Florida: 2 mi. off Panama City | 30°07.2ʹN, 85°46.5ʹW | TAMU | L. Pequegnat | 20 Feb. 1965 | untreated fouling plate |  | 4 |  |  | VAL |
| TAMU loan | P-300, F-2U, I-72 | Gulf of Mexico | U.S.A | Florida: 2 mi. off Panama City | 30°07.2ʹN, 85°46.5ʹW | TAMU | L. Pequegnat | 2 Feb. 1965 | settling float |  | 10 |  |  | VAL |
| TAMU loan | P-23-P, F-2P, i-57 | Gulf of Mexico | U.S.A | Florida: 2 mi. off Panama City | 30°07.2ʹN, 85°46.5ʹW | TAMU | L. Pequegnat | 22 Aug. 1964 | untreated fouling plate |  | 17 |  |  | VAL |
| TAMU loan | P673, F-1U, i-253 | Gulf of Mexico | U.S.A | Florida: 11 mi. off Panama City | 30°00.6ʹN, 85°54.2ʹW | TAMU | L. Pequegnat | 7 Aug. 1965 | settling float |  | 4 |  |  | MAR |
| TAMU loan | P674, F-1U, i-255 | Gulf of Mexico | U.S.A | Florida: 11 mi. off Panama City | 30°00.6ʹN, 85°54.2ʹW | TAMU | L. Pequegnat | 2 Apr. 1966 | settling float |  | 10 |  |  | MAR |
| TAMU loan | P-91, F-1U, i-69 | Gulf of Mexico | U.S.A | Florida: 11 mi. off Panama City | 30°00.6ʹN, 85°54.2ʹW | TAMU | L. Pequegnat | 14 July 1964 | untreated fouling plate |  | 10 |  |  | MAR |

Supplementary Table S4. Collection locations on the North Sea, NE Atlantic and Mediterranean Sea where the trans-hemispheric species of *Jassa* were found in natural habitats. Collections are sorted by latitude and country. Species names are abbreviated by their first three letters.

| **Collection** | **Accession number and station** | **Major water body** | **Country** | **Specific location** | **Co-ordinates** | **Source for co-ordinates** | **Collector** | **Collection date** | **Substrate** | **Microhabitat** | **Depth (m)** | **Temp (C)** | **Salinity (PSU** | **Species** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SNM |  | North Sea | Denmark | Skarreklit | ~57°0 9ʹ27ʺN, 09°01ʹ33ʺE | Google | Andersen | 20 Sept. 1968 |  | amongst bryozoans |  |  |  | MAR |
| G. Krapp-Schickel |  | North Sea | Germany | Helgoland | ~54°10′ 53″ N, 07°53′ 21″ E | Google | G. Krapp-Schickel |  |  | on algae |  |  |  | MAR |
| NHMW | 1985.XVI.361, no. 5644 | North Sea | Germany | Helgoland | ~54°10′ 53″ N, 07°53′ 21″ E | Google | G. Krapp-Schickel |  |  | on algae |  |  |  | MAR |
| NMNH | 172342 | NE Atlantic | France | Brittany: Finistère: Cap Coz | ~47°53ʹ20ʺN, 03°58ʹ52ʺE | Google | A. D. Pizzini |  |  | seaweed |  |  |  | SLA |
| CMN | IZ1987-003, no. 3, S3.3 | NE Atlantic | Spain | Bibao: Meñacoz | ~43°22ʹ60ʺN, 02°58ʹ00ʺE | Google | A. Arresti | July 1985 |  | in *Cladostephus spongiosus* - *Ceramium rubrum* |  |  |  | MAR |
| CMN | IZ1987-003, no. 8 | NE Atlantic | Spain | Bibao: Meñacoz | ~43°22ʹ60ʺN, 02°58ʹ00ʺE | Google | A. Arresti | April 1984 | surge channel |  |  |  |  | MAR |
| CMN | IZ1987-003, no. 6 | NE Atlantic | Spain | Bibao: Arrigunaga | ~43°21ʹ19ʺN, 00 03°01ʹ09ʺW | Google | A. Arresti | July 1983 to Feb. 1984 | *Gelidium pusillum* zone |  |  |  |  | MAR |
| NHMW | 1985.XVI.355, no. 5638 | Mediterranean Sea | Croatia | Rovinj | ~45°04ʹ52ʺN, 13°38ʹ19ʺE | Google | G. Krapp-Schickel |  |  | in *Cymodocea nodosa* |  |  |  | SLA |
| NHMW | 1985.XVI.356, no. 5639 | Mediterranean Sea | Croatia | Rovinj | ~45°04ʹ52ʺN, 13°38ʹ19ʺE | Google | G. Krapp-Schickel |  |  | in *Cymodocea nodosa* |  |  |  | SLA |
| NHMW | 1985.XVI.355, no. 5639 | Mediterranean Sea | Croatia | Rovinj | ~45°04ʹ52ʺN, 13°38ʹ19ʺE | Google | G. Krapp-Schickel |  |  | in *Cymodocea nodosa* | 15 |  |  | SLA |
| NHMW | 1985.XVI.367, no. 5650 | Mediterranean Sea | Croatia | Rovinj | ~45°04ʹ05ʺN, 13°38ʹ19ʺE | Google | G. Krapp-Schickel |  |  |  |  |  |  | SLA |
| CMN | IZ1989-070 | Mediterranean Sea | Croatia | Rovinj | ~45°04ʹ05ʺN, 13°38ʹ19ʺE | Google | G. Krapp-Schickel |  |  | on *Cystoseira adriatica* | 0 |  |  | MOR |
| CMN | IZ1989-071 | Mediterranean Sea | Croatia | Rovinj | ~45°04ʹ05ʺN, 13°38ʹ19ʺE | Google | G. Krapp-Schickel |  |  | in *Dictyopteris membranacea* |  |  |  | SLA |
| G. Krapp-Schickel |  | Mediterranean Sea | Italy | Genova: Saribei | ~44°24ʹ51ʹʹN,08°56ʹ32ʹʹE | Google | G. Krapp-Schickel |  |  | on *Corallina* |  |  |  | MAR |
| M. Ledoyer loan |  | Mediterranean Sea | France | Le Brusc: Menioui | ~43°04ʹ45ʺN, 05°48ʹ16ʺE | Google | M. Ledoyer | 10 May 1982 |  | in epiphytes on *Cystoseira stricta* |  |  |  | MAR, MOR |
| MCVR | 7203 | Mediterranean Sea | Italy | Sicily: Grotta Conza: Conca d'Oro | ~38°11′ 14″ N, 13°16′ 57″ E﻿ | Google | R. Grasso | ~1952 |  | north end of the cave (cave is ~90 m long, 175 m above sea level, 1 km distant from the sea) |  |  |  | SLA |
| NHMW | 1993.XXI, no. 7622 | Mediterranean Sea | Greece | Crete: Aghios Nikolaos | ~35°11′ 00″ N, 25°43′ 00″ E | Google | G. Krapp-Schickel |  |  | in *Cystoseira* | 0.5 |  |  | SLA |
| NHMW | 1993.XXI, no. 7622 | Mediterranean Sea | Greece | Crete: Aghios Nikolaos | ~35°11′ 00″ N, 25°43′ 00″ E | Google | G. Krapp-Schickel |  |  | in *Corallina* | 0 |  |  | SLA |
| NHMW | 1993.XXI, no. 7622 | Mediterranean Sea | Greece | Crete: Aghios Nikolaos | ~35°11′ 00″ N, 25°43′ 00″ E | Google | G. Krapp-Schickel |  |  | in *Corallina* | 0 |  |  | MOR |
| NHMW | 1993.XXI, no. 7622 | Mediterranean Sea | Greece | west Crete | ~35°25ʹ04ʺN, 23°34ʹ10ʺE | Google | G. Krapp-Schickel |  |  | in *Corallina* | 1+ |  |  | MOR |
| NHMW | 1993.XXI, no. 7622 | Mediterranean Sea | Greece | west Crete | ~35°25ʹ04ʺN, 23°34ʹ10ʺE | Google | G. Krapp-Schickel |  |  | in *Corallina* | 0.5 |  |  | SLA |

Supplementary Table S5. Collection locations on the North Sea, NE Atlantic and Mediterranean Sea where the trans-hemispheric species of *Jassa* were found in artificial habitats. Collections are sorted by latitude and country. Species names are abbreviated by their first three letters.

| **Collection** | **Accession number and station** | **Major water body** | **Country** | **Specific location** | Co-ordinates | **Source for co-ordinates** | **Collector** | **Collection date** | **Substrate** | **Micro-habitat** | **Depth (m)** | **Temp (C)** | **Salin-ity (PSU)** | **Species** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| P. G. Moore |  | NE Atlantic | U.K. | Scotland: Isle of Cumbrae: University Marine Biological Station, Millport | ~55°45′ 07″N, 04°55′ 48″ W﻿ | Google | P. G. Moore |  | seawater system pipes |  |  |  |  | MAR |
| CMN |  | NE Atlantic | U.K. | Ireland: County Cork: Lough Hyne | ~54°10′ 53 ″N 07°53′ 21″ E | Google | A. A. Myers | 27 Nov. 1982 | west pier |  |  |  |  | SLA |
| CMN | IZ1986-092, CPP1 | NE Atlantic | U.K. | England: Irish Sea: Morecambe Bay | ~54°07′N, 03°00′W﻿ | Google | P. G. Moore | 19 May 1986 | natural gas platform |  | 8 |  |  | MAR |
| CMN | IZ1986-060 | NE Atlantic | U.K. | Ireland: Celtic Sea: Kinsale Head Field | ~50°30′ 8″ N, 7°54′ 52″ W | Google | T. Southgate and A. A. Myers |  | natural gas platform | amongst *Poly-siphonia brodiaei* Grey and *Ulva lactuca* L. | 0-6 |  |  | MAR |
| NHM | 1910.4.19:1-3 | NE Atlantic | U.K. | England: Devon: Plymouth breakwater | ~50°22ʹ35ʹʹN, 04°08ʹ38ʹʹW | Google | E. W. Sexton | Nov. 1909 | buoys |  |  |  |  | MAR |
| NMNH | 172970 | NE Atlantic | U.K. | England: Plymouth Sound | ~50°22ʹ35ʹʹN, 04°08ʹ38ʹʹW | Google | E. W. Sexton | July-Aug. 1943 | raft |  |  |  |  | MAR |
| NMS | 1959.61.197/S361 | NE Atlantic | U.K. | England: Plymouth | ~50°22ʹ35ʹʹN, 04°08ʹ38ʹʹW | Google | D. M. Reid | 16 June 1942 | breakwater raft |  |  |  |  | MAR |
| NMS | 1959.61.197/S362 | NE Atlantic | U.K. | England: Plymouth | ~50°22ʹ35ʹʹN, 04°08ʹ38ʹʹW | Google | D. M. Reid | 16 June 1942 | breakwater raft |  |  |  |  | MAR |
| NHM | 1959.61.149 | NE Atlantic | U.K. | England: Plymouth | ~50°22ʹ35ʹʹN, 04°08ʹ38ʹʹW | Google | D. M. Reid |  | Millbay dock |  |  |  |  | MAR |
| CMN |  | NE Atlantic | U.K. | England: Plymouth | ~50°22ʹ35ʹʹN, 04°08ʹ38ʹʹW | Google | R. J. Trott | 26 Mar. 1986 | Langstone Harbour | on steel frame used to hold settling plates | 1 |  |  | MAR |
| K. Anger |  | North Sea | Germany | Helgoland Harbour | ~54°10′ 53″ N, 07°53′ 21″ E | Google | K. Anger | 20 Aug. 1984 | harbour |  |  |  |  | MAR |
| J. Beermann |  | North Sea | Germany | Helgoland: Ostmole: South Harbour | ~54°10′ 53″ N, 07°53′ 21″ E | Google | J. Beermann | 12 June 2017 | harbour |  |  |  |  | MAR |
| J. Beermann |  | North Sea | Germany | Helgoland: Sudmole: South Harbour | ~54°10′ 53″ N, 07°53′ 21″ E | Google | J. Beermann | 12 June 2017 | harbour |  |  |  |  | MAR |
| J. Beermann |  | North Sea | Germany | Helgoland: Nordost: Pontoon #44 | ~54°10′ 53″ N, 07°53′ 21″ E | Google | J. Beermann | 12 June 2017 | pontoon |  |  |  |  | MAR |
| J. Beermann |  | North Sea | Germany | Helgoland:Nordost: Bollwerk 2 | ~54°10′ 53″ N, 07°53′ 21″ E | Google | J. Beermann | 12 June 2017 | bulwark |  |  |  |  | MAR |
| MNHN | Am. 2766 | Mediterranean Sea | France | Villefranche | ~43°42ʹ14ʺN, 07°18ʹ40ʺE | Google | E. Chevreux | 6 Nov. 1891 | buoy |  |  |  |  | MAR |
| MNHN | Am. 2768 | Mediterranean Sea | France | Villefranche | ~43°42ʹ14ʺN, 07°18ʹ40ʺE | Google | E. Chevreux | 18 July 1891 | buoy |  |  |  |  | MAR |
| MNHN | Am. 2762 | Mediterranean Sea | France | Cette (Sète) | ~43°24ʹ28ʺN, 03°42ʹ03ʺE | Google | E. Chevreux | May 1897 | buoy |  |  |  |  | MAR |
| M. Ledoyer |  | Mediterranean Sea | France | Var: Faritier la Madrague d'Hyères | ~43°02ʹ00ʺN, 06°06ʹ00ʺE | Google | M. Ledoyer | Jan. 1983 | aquaculture cage |  |  |  |  | MAR |
| MCVR | 7207, 7208 | Mediterranean Sea | Italy | Venice Lagoon: Malamocco | ~45°22ʹ18ʺN, 12°20ʹ15ʺE | Google | T. Krapp | 5 May 2005 | algae in lagoon at shallow depth |  |  |  |  | SLA |
| G. Diviacco | PCW | Mediterranean Sea | Italy | 6 km offshore of Ravenna | ~44°25ʹ06ʺN, 12°12ʹ13ʺE | Google | G. Diviacco | Apr. 1976 | oil drilling platform | asbestos cement panels close to drilling platform | 11 |  |  | MAR |
| G. Diviacco | AGO | Mediterranean Sea | Italy | 18 km offshore of Ravenna | ~44°25ʹ06ʺN, 12°12ʹ13ʺE | Google | G. Diviacco | Apr. 1976 | oil drilling platform | asbestos cement panels close to drilling platform | 9 |  |  | MAR |
| G. Diviacco | AGO | Mediterranean Sea | Italy | 18 km offshore of Ravenna | ~44°25ʹ06ʺN, 12°12ʹ13ʺE | Google | G. Diviacco | Apr. 1976 | oil drilling platform | asbestos cement panels close to drilling platform | 0 |  |  | MAR |
| G. Diviacco | station 1 | Mediterranean Sea | Italy | Savona: Vado Ligure | ~44°15ʹ53ʺN, 08°25ʹ56ʺE | Google | G. Diviacco | Feb. 1974 | incurrent seawater cooling pipe for the thermo-electric plant | asbestos cement panels immersed in seawater pipes |  |  |  | MAR |
| G. Diviacco | station 3 | Mediterranean Sea | Italy | Savona: Vado Ligure | ~44°15ʹ53ʺN, 08°25ʹ56ʺE | Google | G. Diviacco | Mar. 1975 | excurrent seawater cooling pipe for the thermo-electric plant | asbestos cement panels immersed in seawater pipes |  |  |  | MAR |
| G. Diviacco | station A | Mediterranean Sea | Italy | Civitavecchia: Torvaldaliga | ~42°07ʹ42ʺN, 11°45ʹ24ʺE | Google | G. Diviacco | Nov. 1978 | east incurrent seawater cooling pipe for the thermo-electric plant | asbestos cement panels immersed in the seawater pipe |  |  |  | MAR |
| G. Diviacco | station D | Mediterranean Sea | Italy | Civitavecchia: Torvaldaliga | ~42°07ʹ42ʺN, 11°45ʹ24ʺE | Google | G. Diviacco | Nov. 1978 | west incurrent seawater cooling pipe for the thermo-electric plant | asbestos cement panels immersed in the seawater pipe |  |  |  | MAR |
| G. Diviacco |  | Mediterranean Sea | Italy | 6.5 km offshore of Crotone | ~39°04ʹ51ʺN, 17°07ʹ38ʺE | Google | G. Diviacco | Apr. 1976 | oil drilling platform | asbestos cement panels close to drilling platform | 20 |  |  | MAR |
| G. Diviacco |  | Mediterranean Sea | Italy | 6.5 km offshore of Crotone | ~39°04ʹ51ʺN, 17°07ʹ38ʺE | Google | G. Diviacco | Mar. 1976 | oil drilling platform | asbestos cement panels close to drilling platform | 14 |  |  | MAR |
| G. Diviacco |  | Mediterranean Sea | Italy | 6.5 km offshore of Crotone | ~39°04ʹ51ʺN, 17°07ʹ38ʺE | Google | G. Diviacco | May 1976 | oil drilling platform | asbestos cement panels close to drilling platform | 0 |  |  | MAR |
| MNHN | Am. 2765 | Mediterranean Sea | Algeria | Bône (Annaba) | ~36°55ʹ35ʺN, 07°45ʹ09ʺE | Google | E. Chevreux | 20 May 1897 | buoys |  |  |  |  | MAR |
| MNHN | Am. 2764 | Mediterranean Sea | Algeria | Bône (Annaba) | ~36°55ʹ35ʺN, 07°45ʹ09ʺE | Google | E. Chevreux | 14 June 1902 | buoy |  |  |  |  | MAR |
| MNHN | Am. 2761 | Mediterranean Sea | Algeria | Bône (Annaba) | ~36°55ʹ35ʺN, 07°45ʹ09ʺE | Google | E. Chevreux | June 1901 | buoy |  |  |  |  | MAR |

Supplementary Table S6. Collection locations outside of North America and Europe where the trans-hemispheric species of *Jassa* were found in natural habitats. Collections are sorted by latitude and country. Species names are abbreviated by their first three letters.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Collec-tion** | **Accession number and station** | **Major water body** | **Country** | **Specific location** | **Co-ordinates** | **Source for co-ordinates** | **Collector** | **Collec-tion date** | **Substrate** | **Microhabitat** | **Depth (m)** | **Temp (C)** | **Salinity (PSU** | **Species** |
| CMN | 1980-310 | Tasman Sea | Australia | Tasmania: Hobart: Blackmans Bay | ~42°59ʹ56ʺS, 147°19ʹ08ʺE | Google | D. Laubitz | 21 Apr. 1980 |  | amongst weeds and rocks |  |  |  | MAR, SLA |
| CMN | 1978-287, 9b | Tasman Sea | Australia | Tasmania: Hobart: Blackmans Bay | ~42°59ʹ56ʺS, 147°19ʹ08ʺE | Google | E. L. Bousfield | 4 Nov. 1978 |  | in rock pools |  |  |  | MAR |
| ZIN |  | Sea of Japan | Russia | Peter the Great Bay: Vitiaz Inlet | ~42°41ʹ06ʺN, 131°59ʹ44ʺE | Google | P. Fedorov | 28 Mar. 1984 |  | in *Zostera marina* community | 5 |  |  | MAR |
| I. Takeuchi loan |  | NW Pacific | Japan | Iwate Pref.: Otsuchi Bay | ~39°21′ 29.7″ N, 141°53′ 58″ E | Google | L. D. McCann and I. Takeuchi | 6 June 1990 |  | from *Zostera marina* | ~3 |  |  | SLA |
| H. Morino loan |  | NW Pacific | Japan | Wakayama Pref.: Tanabe Bay: Bansho-no-hana Pt. | 33°42ʹN, 135°20ʹE | Conlan (1990) | H. Morino | 17 Mar. 1971 |  | on *Sargassum microcanthum* | LW |  |  | MOR |
| UCT | NA 244F | Indian | South Africa | Natal (Durban): Scottburgh | ~30°17ʹ12ʺS, 30°45ʹ12ʺE | Google | C. Griffiths | 27 July 1972 |  | weeds |  |  |  | MAR, MOR |

Supplementary Table S7. Collection locations outside of North America and Europe where the trans-hemispheric species of *Jassa* were found in artificial habitats. Collections are sorted by latitude and country. Species names are abbreviated by their first three letters.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Collec-tion** | **Accession number and station** | **Major water body** | **Country** | **Specific location** | **Co-ordinates** | **Source for co-ordinates** | **Collector** | **Collection date** | **Substrate** | **Microhabitat** | **Depth (m)** | **Temp (C)** | **Salinity (PSU** | **Species** |
| CMN | IZ1990-001, Oshoro stn. 2-I | Sea of Japan | Japan | Hokkaido: Oshoro Bay | ~43°11ʹ25ʺN, 140°53ʹ09ʺE | Google | S. Ishimaru | 2 June 1982 | on *Laminaria* and *Ulva* beneath buoys of fishermen |  |  |  |  | MAR, MOR |
| CMN | IZ1990-001, Akkeshi stn. 16(1)-VII | NW Pacific | Japan | Hokkaido: Akkeshi Bay: Daikoku I. | ~42°57′ 01″ N, 144°52′ 09″ E | Google | S. Ishimaru | 23 July 1982 | among *Laminaria* belt |  | LW |  |  | MAR |
| I. Takeuchi loan |  | NW Pacific | Japan | Iwate Pref.: Otsuchi Bay | ~39°21′ 30″ N, 141°53′ 58″ E﻿ | Google | I. Takeuchi | 6 Mar. 1991 | aquaculture structure for the brown alga *Undaria pinnatifica* (Harvey) Suringar | on small filamentous red algae epiphytic on the brown algae | 1 |  |  | SLA |
| NMNH |  | NW Pacific | Japan | Kobe | ~34°41ʹ24ʺN, 135°11ʹ44ʺE | Google |  | 22 July 1988 | in ballast of ship *Taio Cosmos*, to be dumped into Coos Bay, Oregon |  |  | 15 | 28.5 | MAR |
| NMNH | 362479 | Yellow Sea | China | Qingdao: Zhanqiao Bay | ~36°04′ 01″ N, 120°22′ 58″ E | Google |  | 20 July 1984 | raft seeding experiment "UNAL" |  |  |  |  | MAR |
| NMNH | 179816, 106790 | Yellow Sea | China | Tsingtao (Qingdao) | ~36°04′ 01″ N, 120°22′ 58″ E | Google | U. S. Navy C. H. Edmondson | 30 June 1948 | from test block for marine borers |  |  |  |  | MAR |
| CMN |  | Yellow Sea | The Republic of Korea | Boseong-Gun: Deukryang Bay | ~34°46ʹ17ʺN, 127°04ʹ48ʺE | Google | J. S. Hong | May-July 1981 | settling plate |  |  |  |  | SLA |
| MNHN | Am. 2767, Melita Stn. 334 | NE Atlantic | Senegal | Dakar | ~14°43ʹ00ʺN, 17°28ʹ04ʺW | Google | E. Chevreux | 1 Mar. 1890 | along the big dyke |  |  |  |  | MOR |
| MNHN | Am. 2769, Melita Stn. 313 | NE Atlantic | Senegal | Dakar | ~14°43ʹ00ʺN, 17°28ʹ04ʺW | Google | E. Chevreux | 5 Feb. 1890 | on seaweed brought back by a wet trammel |  |  |  |  | MAR |
| SNM |  | NE Atlantic | The Gambia | Bathurst (Banjul) | ~13°27ʹ18ʺN, 16°34ʹ44ʺW | Google | Atlantide Expedition 1945-1946 | 22, 28 Oct. 1945 | fouling ships |  |  |  |  | MAR |
| CMN | IZ1985-095 | SW Atlantic | Brazil | São Paulo region: Cananeia region | ~25°02ʹS, 47°56ʹW | Google | A. S. Tararam | June 1985 | scraping of small ship |  |  |  |  | SLA, VAL |
| A. Desiderato loan | NPNwB11Jassa | SW Atlantic | Brazil | Pontal do Sul | 25°33ʹ32.4ʺS, 48°20ʹ27.6ʺW | A. Desiderato | A. Desiderato |  | settling plate |  | surface |  |  | VAL |
| A. Desiderato loan | JSIAH310 313-315 and 317-320, PRy10Jassa, JSIcfAH311, JMAAH312 and 316 | SW Atlantic | Brazil | Paranà: Paranaguà | 25°34ʹ29.9994ʺS, 48°30ʹ3.5994ʺW | A. Desiderato | A. Desiderato |  | settling plate |  |  |  |  | VAL |
| A. Desiderato loan | GTcA8JS01 | SW Atlantic | Brazil | Paranà: Guaratuba | 25°52ʹ22.8ʺS, 48°34ʹ44.4ʺW | A. Desiderato | A. Desiderato |  | settling plate |  |  |  |  | VAL |
| A. Desiderato loan | LS2JS01 | SW Atlantic | Brazil | Paranà: Matinho, 30 km from the coast | 25°45ʹ57.06ʺS, 48°8ʹ0.8622ʺW | A. Desiderato | A. Desiderato |  | settling plate |  |  |  |  | VAL |
| MNRJ, ZUEC, A. Desiderato loan | JSIAH321-330 | SW Atlantic | Brazil | Santa Catarina: Babitonga | 26°14ʹ20.4ʺS, 48°38ʹ49.1994ʺW | A. Desiderato | A. Desiderato |  | settling plate |  |  |  |  | VAL |
| CMN | IZ 1989-069 | SE Pacific | Chile | Coquimbo: La Herradura Bay: Guayacán | ~29°58ʹ52ʺS, 71°22ʹ59ʺW | Google | E. Gonzalez | 22 Nov. 1984 | on a raft floating out at sea |  |  |  |  | MAR, SLA |
| AM | P. 8954 | Tasman Sea | Australia | New South Wales: Port Jackson: Circular Quay jetties | ‎~33°51′ 40″S, 151°12′ 40″E﻿ | Google | F. A. McNeill | Dec. 1927 | from 3ʺx 3ʺtimber test pieces |  |  |  |  | MAR |
| AM | P. 10875 | Tasman Sea | Australia | New South Wales: Port Jackson: Circular Quay jetties | ‎~33°51′ 40″S, 151°12′ 40″E﻿ | Google | F. A. McNeill and K. Sheard | 11 Oct. 1926 | among weeds on timber |  |  |  |  | MAR |
| AM | P. 18335 | Tasman Sea | Australia | New South Wales: Port Jackson: Circular Quay jetties | ‎~33°51′ 40″S, 151°12′ 40″E﻿ | Google | F. A. McNeill and R. A. Johnston | 1 July 1927 | from 3ʺx 3ʺtimber test pieces |  |  |  |  | MAR |
| SAM | numerous | Great Australian Bight | Australia | Adelaide: West Beach marina | ‎~34°56′ 43″S, 138°30′ 14″E﻿ | Google | K. E. Conlan | monthly, Sep. 2009-Sep. 2010 | on algae on floating docks |  |  |  |  | MAR, SLA |
| UCT | DBN 131P | Indian Ocean | South Africa | Durban | ~29°51ʹ31ʺS, 31°1ʹ18ʺE | Google | C. Griffiths | 15 Jan. 1951 | scraping from ship's hulls |  |  |  |  | MAR |
| UCT | CP 323M | SE Atlantic | South Africa | Cape Peninsula: Table Bay: Sturrock Dock | ~34°16ʹ15ʹʹS, 18°27ʹ35ʹʹE | Google |  | 20 Feb. 1948 | dry dock |  |  |  |  | MAR |
| NHM | 89.5.15.138 | SE Atlantic | South Africa | Challenger Station 142, 128 km offshore of Cape Town | 35°04ʹS,  18°37ʹE | Stebbing (1888) | *Challenger* Expedition | 18 Dec. 1873 | on the screw of the HMS *Challenger* |  |  |  |  | MAR |
| NHM |  | Southern Ocean | Kerguelen Islnds | Challenger Station 149 | ~49°15′ 0″S, 69°10′ 0″E | Murray & Thomson (1895) | *Challenger* Expedition | 9-29 Jan. 1874 | on the screw of the HMS *Challenger* |  |  |  |  | MAR |

Supplementary Table S8. Latitudinal transect on the Pacific coast of North America showing locations where the trans-hemispheric species of *Jassa* were found in natural habitats. Species names are abbreviated by their first three letters.

| **Collec-tion** | **Accession number and station** | **Coun-try** | **Specific location** | **Co-ordinates** | **Source for co-ordin-ates** | **Collector** | **Collec-tion date** | **Substrate** | **Micro-habitat** | **Depth (m)** | **Temp (C)** | **Salin-ity (PSU** | **Species** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CMN | 1964-198, H53 | Canada | B.C.: Athlone I.: St. John Harbour | 52°11ʹ08ʺN, 128°28ʹ51ʺW | CMN | E. L. Bousfield | 7 Aug. 1964 | surf exposed bedrock, boulders, *Phyllospadix,* kelp, *Corallina* |  | LW | 14.2 | 30.3 | MOR |
| CMN | 1964-198, H48 | Canada | B.C.: Goose I. | 52°0ʹ09ʺN, 128°25ʹ29ʺW | CMN | E. L. Bousfield | 5 Aug. 1964 | fine white sand with kelp and woody debris |  | LW |  |  | SLA |
| CMN | 1959-112, O7b, cat. cat. 3061 | Canada | B.C.: Vancouver I: Nuchatlitz Inlet: Benson Pt. | 49°46ʹ53ʺN, 126°52ʹ12ʺW | CMN | E. L. Bousfield | 20 Aug. 1959 | rock faces |  |  |  |  |  |
| CMN | 1959-112, O11, cat. 3062 | Canada | B.C.: Vancouver I: Hesquiat | 49°23ʹ5ʺN, 126°28ʹ13ʺW | CMN | E. L. Bousfield | 19 Aug. 1959 | exposed coast with boulders and kelp, *Phyllospadix, Zostera*, fucoids, etc. over soft shale bedrock. No sand |  | LW | 15 |  | MOR |
| CMN | 1977-181, B11b | Canada | B.C.: Vancouver I: Wickanninish Bay | 49°00ʹ48ʺN, 125°40ʹ31ʺW | CMN | E. L. Bousfield | 23 May 1977 | bedrock, *Phyllospadix* roots, steep rock walls with sponge, hydroids and algae |  | LW | 11 |  | MOR |
| CMN | 1970-152, P702 | Canada | B.C.: Vancouver I: Long Beach | 49°00ʹ41ʺN, 125°40ʹ42ʺW | CMN | E. L. Bousfield | 6 July 1970 | exposed coast bedrock, kelp, *Phyllospadix,* fucoids. Modest surf |  | LW |  |  | SLA, MOR |
| CMN | 1955-104, P7 | Canada | B.C.: Vancouver I.: Bay just N. of Quisitis Pt. | 48°59ʹ57ʺN, 125°40ʹ17ʺW | CMN | E. L. Bousfield | 4 Aug. 1955 | rocks, boulders, gravel beach, dense kelp beds |  | LW | 12.2 | 31.2 | MOR |
| CMN | 1909-2, 9816 | Canada | B.C.: Vancouver I: Ucluelet | ~48°56ʹ30 N", 125°32ʹ47ʺW | Google | Young and Spreadborough | May-July 1909 |  |  |  |  |  | MOR |
| CMN | 1955-104, P9 | Canada | B.C.: Vancouver I.: 0.5 mi. north of Amphitrite Point | 48°55ʹN, 125°31ʹW | CMN | E. L. Bousfield | 7 Aug. 1955 | rocks, boulders, organic sand at bay heat at LW line |  | LW | 13 | 30.7 | MOR |
| CMN | 1975-205, P3a | Canada | B.C.: Vancouver I: Barkley Sound: W side of Trevor Ch.: Sandford I. | 48°51ʹ56ʺN, 125°10ʹ15ʺW | CMN | E. L. Bousfield | 23 July 1975 | Bedrock, boulders, brown algae, kelp, tidepools |  | LW | ~12 | ~32 | MOR |
| CMN | 1976-157, B7 | Canada | B.C.: Vancouver I: Barkley Sound: Broken I.: W side of Wouwer I. | 48°51ʹ52ʺN, 125°21ʹ48ʺW | CMN | E. L. Bousfield | 27 June 1976 | bedrock, Phyllospadix, Egregia, kelp, etc. Collection under rock and sponges, boulders and *Phyllospadix* roots and holdfasts |  |  |  |  | MOR |
| CBG | BCAMP0234 | Canada | B.C.: Vancouver I: Barkley Sound: Dixon I. | 48°51ʹ07ʺN, 125°07ʹ23ʺW | CBG | C. Carr | 4 June 2008 |  |  | 0 |  |  | MOR |
| CMN | 1975-205, P17d | Canada | B.C.: Vancouver I: Barkley Sound: Diana I.: Kirby Pt. Bay | 48°50ʹ43ʺN, 125°12ʹ17ʺW | CMN | E. L. Bousfield | 6 Aug. 1975 | rocky shore, scraping from sponge, ascidian, *Phyllospadix* |  | LW |  |  | SLA, MOR |
| CMN | 1987-002, 87-12-9 | Canada | B.C.: Vancouver I: Barkley Sound: Seppings I. | 48°50ʹ24ʺN, 125°12ʹ24ʺW | CMN | K. E. Conlan | 29 Dec. 1986 | bedrock on exposed coast | on *Rhodymenia* | LW |  |  | MOR |
| CMN | IZ1987-002, 87-12-10 | Canada | B.C.: Vancouver I: Barkley Sound: Seppings I. | 48°50ʹ24ʺN, 125°12ʹ24ʺW | CMN | K. E. Conlan | 29 Dec. 1986 | bedrock on exposed coast | from *Corallina* | LW |  |  | MOR |
| CMN | 1973-128, 598 | Canada | B.C.: Vancouver I: Barkley Sound: Trevor Channel: Aguilar Point | ~48°50ʹ22ʺN 125°08 '26ʺW | Google | D. Kittle | 26 July 1972 |  |  |  |  |  | MOR |
| CMN | 1975-205 | Canada | B.C.: Vancouver I: Barkley Sound: Trevor Channel: Haines I. | ~48°50ʹ00ʹʹN, 125°12ʹ04ʺW | Google | L. Daniels | 8 Aug. 1975 |  |  | 3-6 |  |  | MOR |
| CMN | 1970-152, P712 | Canada | B.C.: Vancouver I: Barkley Sound: Trevor Channel: David I. | 48°49ʹ45ʺN, 125°11ʹ54ʺW | CMN | E. L. Bousfield | 21 Aug. 1970 | exposed kelp, bedrock |  | LW | 12.7 |  | SLA, MOR |
| CMN | 1970-152, P711 | Canada | B.C.: Vancouver I: Barkley Sound: Brady's Beach | 48°49ʹ41ʺN, 125°09ʹ09ʺW | CMN | E. L. Bousfield | 20 July 1970 | sand, rock |  | LW | 14 |  | MOR |
| CMN | 1975-205, P5b | Canada | B.C.: Vancouver I: Barkley Sound: Trevor Channel: Taylor's I. | 48°49ʹ30ʺN, 125°12ʹW | CMN | E. L. Bousfield | 25 July 1975 | kelp, rock walls, exposed coast |  | 1 |  |  | SLA, MOR |
| CMN | 1975-205, P5c | Canada | B.C.: Vancouver I: Barkley Sound: Trevor Channel: Taylor's I. | 48°49ʹ30ʺN, 125°12ʹW | CMN | E. L. Bousfield | 25 July 1975 | from ascidian and spondes under boulders on exposed coast |  | LW |  |  | MOR |
| CMN | 1977-181, B19a | Canada | B.C.: Vancouver I: Barkley Sound: Brady's Beach | 48°49ʹ28ʺN, 125°09ʹ40ʺW | CMN | E. L. Bousfield | 1 June 1977 | bedrock, *Phyllospadix* at infralittoral fringe |  | LW |  |  | MOR |
| CMN | 1977-181, B12b | Canada | B.C.: Vancouver I: Barkley Sound: First Beach below Brady's Beach | 48°49ʹ05ʺN, 125°09ʹ49ʺW | CMN | E. L. Bousfield | 24 May 1977 | high water brackish tidepools containing *Enteromorpha* |  |  |  |  | MOR |
| CMN | 1975-205, P20a | Canada | B.C.: Vancouver I: Barkley Sound: Bordelais I., entrance to Trevor Channel | 48°49ʹ04ʺN, 125°13ʹ50ʺW | CMN | E. L. Bousfield | 9 Aug. 1975 | Stones, *Phyllospadix,* surf and swell | in *Phyllospadix* roots, under stone. Surf and swell | LW |  |  | MOR |
| CMN | 1970-152, P710 | Canada | B.C.: Vancouver I: Barkley Sound: Cape Beale | 48°47ʹ07ʺN, 125°12ʹ59ʺW | CMN | E. L. Bousfield | 19 July 1970 | bedrock, sand |  | LW | 13 |  | SLA, MOR |
| CMN | 1970-152, P719 | Canada | B.C.: Vancouver I: Cape San Juan: Botanical Gardens | 48°31ʹ42ʺN, 124°27ʹ07ʺW | CMN | E. L. Bousfield | 1 Aug. 1970 | bedrock, boulders, pebbles, limited kelp, various marine algae, *Phyllospadix* |  | LW | 11 |  | MOR |
| CMN | 1972-328, cat. 5926 | Canada | B.C.: Vancouver I: Botanical Beach | 48°31ʹ32ʺN, 124°26ʹ33ʺW | CMN | R. K. Lee | 7 July 1971 |  |  | LW |  |  | SLA |
| CMN | 1969-319 | Canada | B.C.: Vancouver I: Sooke: Whiffen Spit | ~48°21ʹ37ʺN, 123°44ʹ12ʺW | Google | N. A. Powell | 11 Aug. 1969 |  |  |  |  |  | SLA |
| CMN | 1966-211, W40 | USA | Washington: Clallam County: Neah Bay: Sooes Pt. | 48°19ʹ00ʺN, 124°40ʹ00ʺW | CMN | E. L. Bousfield | 31 July 1966 | exposed coast, bedrock, boulders, shelly sand beach, large kelp, *Phyllospadix, Zostera, Chorda* |  | LW | 12.3 |  | SLA, MOR |
| CMN | 1966-211, W60 | USA | Oregon: Lincoln County: Otter Rock at Marine Gardens | 44°45ʹ00ʺN, 124°04ʹ00ʺW | CMN | E. L. Bousfield | 14 Aug. 1966 | sandstone bedrock, riddled by urchins and bivalves, righ algal cover, *Phyllospadix, Chorda* |  | MW | 8.8 |  | MOR |
| CMN | 1966-211, W58 | USA | Oregon: Lincoln County: Seal Rocks | 44°29ʹ51ʺN, 124°05ʹ04ʺW | CMN | E. L. Bousfield | 13 Aug. 1966 | exposed coast sandstone bedrock with kelps (*Egregia, Laminaria*), *Chorda, Zostera* and fucoids |  | LW | 9 | 34 | MOR |
| CMN | IZ1986-057, O8-11 | USA | Oregon: Lincoln County: Seal Rocks | 44°29ʹ51ʺN, 124°05ʹ04ʺW | CMN | E. L. Bousfield | 9 July 1986 | exposed coast sandstone bedrock with kelps (*Egregia, Laminaria*), *Chorda, Zostera* and fucoids | in *Phyllospadix* *scouleri* | LW |  |  | SLA |
| CMN | 1966-211, W57 | USA | Oregon: Lane County: Cape Perpetua at Devil's Churn | 44°16ʹ59ʺN, 124°06ʹ42ʺW | CMN | E. L. Bousfield | 12 Aug. 1966 | tidepools in bedrock with surf surging in, Chorda and eelgrass in sand bottom |  | MHW |  |  | MOR |
| CMN | IZ1986-057, O6-3 | USA | Oregon: Coos County: Sunset Bay | ~43°19ʹ50ʺN, 124°22ʹ23ʺW | Google | K. E. Conlan | 8 July 1986 | amongst *Phyllospadix scouleri* |  | 0.5 |  |  | MOR |
| NMNH | 141032 | USA | California: Sonoma County: Bodega Bay | ~38°19ʹ59.5ʺN, 123°2ʹ53ʺW | Google | R. I. Smith | 16 Dec. 1971 | shell beach, amongst *Phyllospadix* |  | LW |  |  | MOR |
| CMN | IZ1989-024 | USA | California: Monterey County: Carmel Bay: Stillwater Cove | ~36°33ʹ60ʺN, 121°56ʹ36ʺW | Google | P. N. Slattery | June 1985 | rock and coralline bottom |  | 11 |  |  | MOR |
| CMN | IZ1986-057, C12-1 | USA | California: San Luis Obispo County: Cayucos | 35°27ʹN, 120°54ʹW | CMN | K. E. Conlan | 6 July 1986 | bedrock on exposed coast | in *Phyllospadix* | LW |  |  | SLA |
| NHMLA | 38-A-3 | USA | California: San Luis Obispo County: Cayucos | ~35°26ʹ34ʺN, 120°53ʹ32ʺW | Google | J. L. Barnard | 1 July 1961 | in *Phyllospadix* zone on rock surfaces |  | LW |  |  | MOR |
| J. R. Chess loan |  | USA | California: Los Angeles County: Catalina I.: Bird Rock | ~33°27ʹ05ʺN, 118°29ʹ13ʺW | Google | J. R. Chess | 13 May 1980 | kelp stipe *(Eisenia)* |  | 3 |  |  | MOR |
| CMN | IZ1991-007 | USA | California:  Los Angeles County: west end of Catalina I. | ~33°23ʹ00ʹʹN, 118°26ʹ00ʹʹW | Google | J. R. Chess | 8 May 1974 |  | from *Placamium cartilaginum* | 10 |  |  | MOR |
| CMN | IZ1991-007 | USA | California: Los Angeles County: west end of Catalina I. | ~33°23ʹ00ʹʹN, 118°26ʹ00ʹʹW | Google | J. R. Chess | 8 July 1975 |  | from *Gelidium robustum* | 10 |  |  | MOR |

Supplementary Table S9. Latitudinal transect on the Pacific coast of North America showing locations where the trans-hemispheric species of *Jassa* were found in artificial habitats. Species names are abbreviated by their first three letters.

| **Collection** | **Accession number and station** | **Country** | **Specific location** | **Co-ordinates** | **Source for co-ordinates** | **Collector** | **Collection date** | **Substrate** | **Microhabitat** | **Depth (m)** | **Temp (C)** | **Salinity (PSU** | **Species** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CMN |  | Canada | B.C.: Vancouver: Pacific Environment Institute | ~49°14ʹ47ʹʹN, 123°06ʹ58ʹʹW | Google |  |  | in halibut tank |  |  |  |  | MAR |
| CMN | 1955-104, M11 | Canada | B.C.: White Rock | 49°01ʹ02ʺN, 122°48ʹ21ʺW | CMN | E. L. Bousfield | 30 Aug. 1955 | rock breakwater - jagged granite rock covered with sharp barnacles and mussels | amongst mussels | LW | 18.1 |  | MOR |
| CMN | IZ1987-002, 87-11-3 | Canada | B.C.: Vancouver I.: Barkley Sound: Bamfield Marine Sciences Centre | 48°50.2ʹN, 125°08.0ʹW | CMN | K. E. Conlan | 28 Dec. 1986 | floating dock | hydroid | shallow subtidal |  |  | MAR |
| CMN | IZ1987-002, 87-7-1 | Canada | B.C.: Vancouver I.: Victoria harbour | 48°25ʹN, 123°20ʹW | CMN | K. E. Conlan | 16 Dec. 1986 | floating dock | hydroids, *Enteromorpha, Laminaria saccharina* | shallow subtidal |  |  | MAR |
| CMN | IZ1987-002, 87-7-2 | Canada | B.C.: Vancouver I.: Victoria harbour | 48°25ʹN, 123°20ʹW | CMN | K. E. Conlan | 16 Dec. 1986 | floating dock | hydroids, *Enteromorpha, Laminaria saccharina* | shallow subtidal |  |  | MAR |
| CMN | IZ1987-002, 87-7-3 | Canada | B.C.: Vancouver I.: Victoria harbour | 48°25ʹN, 123°20ʹW | CMN | K. E. Conlan | 16 Dec. 1986 | floating dock | hydroids, *Enteromorpha, Laminaria saccharina* | shallow subtidal |  |  | MAR |
| CMN | IZ1987-002, 87-6 | Canada | B.C.: Vancouver I.: Victoria harbour | 48°25ʹN, 123°20ʹW | CMN | K. E. Conlan | 16 Dec. 1986 | floating dock | on *Laminaria saccharina* holdfast | shallow subtidal |  |  | MAR |
| CMN | IZ1986-057, O7-1 | U.S.A | Oregon: Coos County: mouth of Coos Bay | 43°21ʹN, 124°20ʹW | CMN | K. E. Conlan | 8 July 1986 | floating dock | in *Enteromorpha intestinalis* and *Polysiphonia* sp. on rope suspended from floating dock | shallow subtidal |  |  | MAR |
| CMN | IZ1986-057, C1-1 | U.S.A | California: Del Norte County: Crescent City inner harbor | 41°45ʹN, 124°11ʹW | CMN | K. E. Conlan | 1 July 1986 | floating dock | in brown algae | shallow subtidal |  |  | MAR |
| CMN | IZ1986-057, C1-2 | U.S.A | California: Del Norte County: Crescent City inner harbor | 41°45ʹN, 124°11ʹW | CMN | K. E. Conlan | 1 July 1986 | floating dock | in red filamentous algae | shallow subtidal |  |  | MAR |
| CMN | IZ1986-057, C1-3 | U.S.A | California: Del Norte County: Crescent City inner harbor | 41°45ʹN, 124°11ʹW | CMN | K. E. Conlan | 1 July 1986 | floating dock | in red filamentous algae | shallow subtidal |  |  | MAR |
| CMN | IZ1986-057, C1-6 | U.S.A | California: Del Norte County: Crescent City inner harbor | 41°45ʹN, 124°11ʹW | CMN | K. E. Conlan | 1 July 1986 | floating dock | amongst diatoms on rope suspended from floating dock | shallow subtidal |  |  | MAR |
| CMN | IZ1986-057, C2-11 | U.S.A | California: Del Norte County: Crescent City: seaward end of inner harbor | 41°45ʹN, 124°11ʹW | CMN | K. E. Conlan | 2 July 1986 | Coast Guard floating dock | amongst fine filamentous red algae coated with diatoms | shallow subtidal |  |  | MAR |
| CMN | IZ1986-057, C2-12 | U.S.A | California: Del Norte County: Crescent City: seaward end of inner harbor | 41°45ʹN, 124°11ʹW | CMN | K. E. Conlan | 2 July 1986 | Coast Guard floating dock | mixed algae | shallow subtidal |  |  | MAR |
| CMN | IZ1986-057, C3 | U.S.A | California: Del Norte County: Crescent City: outer harbor | 41°45ʹN, 124°11ʹW | CMN | K. E. Conlan | 2 July 1986 | floating dock | dock scraping | shallow subtidal |  |  | MAR |
| CMN | IZ1986-057, C5-2 | U.S.A | California: Humboldt County: Eureka Harbor: Wooley I. marina | 40°49ʹN, 124°09ʹW | CMN | K. E. Conlan | 2 July 1986 | floating dock | amongst hydroids | shallow subtidal |  |  | SLA |
| CAS | 79-1-33 | U.S.A | California: San Francisco: Steinhart Aquarium | 37°46ʹ11.3844ʹʹN, 122°27ʹ57.978ʹʹW | Google | D. Powell and D. Drake | 28 Nov. 1977 | from margin of shark tank, where water current runs quite fast |  |  |  |  | MAR |
| CMN | IZ1986-057, C8-1 | U.S.A | California: San Mateo County: Pillar Pt. Harbor | 37°29.5ʹN, 122°30ʹW | CMN | K. E. Conlan | 3 July 1986 | floating dock | hydroids | shallow subtidal |  |  | MAR, SLA |
| CMN | 1989-004 | U.S.A | California: Monterey County: Monterey Bay boat launch floating dock | ~36°48ʹN, 121°56ʹW | Google | K. E. Conlan | 1 Jan. 1989 | floating dock | mixed algae | shallow subtidal |  |  | MAR |
| CMN | IZ1989-024 | U.S.A | California: Monterey County: Moss Landing Harbor | 36°48ʹN, 121°47ʹW | CMN | P. N. Slattery | 1974-75 | harbour |  | 7 |  |  | SLA |
| CMN | IZ1986-057, C9 | U.S.A | California: Monterey County: Moss Landing Harbor | 36°48ʹN, 121°47ʹW | CMN | K. E. Conlan | 4 July 1986 | floating dock | mixed algae | shallow subtidal |  |  | MAR |
| NMNH | 120848 | U.S.A | California: Monterey County: Hopkins Marine Station | ~36°37ʹ13.8ʺN, 121°54ʹ16.2ʺW | Google | G. E. MacGinitie | 7 June 1931 | boat bottom |  | shallow subtidal |  |  | MAR |
| CMN | IZ1986-057, C11-1 | U.S.A | California: Monterey County: Monterey at Fisherman's Wharf | 36°36.5ʹN, 121°54.5ʹW | CMN | K. E. Conlan | 5 July 1986 | floating dock | mixed algae | shallow subtidal |  |  | SLA |
| CMN | IZ1986-057, C13-1 | U.S.A | California: San Luis Obispo County: Morro Bay Marina | 35°22ʹN, 120°52ʹW | CMN | K. E. Conlan | 6 July 1986 | floating dock |  | shallow subtidal |  |  | SLA |
| CMN | IZ1986-057, C13-6 | U.S.A | California: San Luis Obispo County: Morro Bay Marina | 35°22ʹN, 120°52ʹW | CMN | K. E. Conlan | 6 July 1986 | floating dock | on *Ulva* | shallow subtidal |  |  | SLA |
| CMN | IZ1986-057, C13-7 | U.S.A | California: San Luis Obispo County: mouth of Morro Bay Marina | 35°22ʹN, 120°52ʹW | CMN | K. E. Conlan | 6 July 1986 | floating dock | on red algae on rope suspended from the dock | shallow subtidal |  |  | SLA |
| CMN | IZ1986-057, C13-9 | U.S.A | California: San Luis Obispo County: south side of Morro Bay Marina | 35°22ʹN, 120°52ʹW | CMN | K. E. Conlan | 6 July 1986 | floating dock | on red algae | shallow subtidal |  |  | MAR, SLA |
| NHMLA |  | U.S.A | California: Orange County: Newport Harbor: Ellis Bt. Ldg. | ~33°37ʹ8ʺN, 117°55ʹ47ʺW | Google | J. L. Mohr | 27 July 1951 |  | amongst sponges and ascidians |  |  |  | SLA |
| NHMLA | Newport 7 | U.S.A | California: Orange County: Newport Harbor | ~33°37ʹ8ʺN, 117°55ʹ47ʺW | Google |  |  | benthic sample of black mud, plant debris |  | 5.2 |  | 33.8 | SLA |
| NHMLA | Newport 10 | U.S.A | California: Orange County: Newport Harbor | ~33°37ʹ8ʺN, 117°55ʹ47ʺW | Google |  | Jan. 1954 | benthic sample of gray mud, eel grass, plant debris |  | 4 |  | 33.5 | SLA |
| NHMLA | Newport 29 | U.S.A | California: Orange County: Newport Harbor | ~33°37ʹ8ʺN, 117°55ʹ47ʺW | Google |  | 25-26 Jan. 1954 | benthic sample of brown-gray clay |  | 3.1 | 14.2 | 33.5 | SLA |
| NHMLA |  | U.S.A | California: Orange County: Upper Newport Bay, above bridge | ~33°37ʹ8ʺN, 117°55ʹ47ʺW | Google |  | 20 Dec. 1953 |  | on *Zostera* |  |  |  | SLA |
| CMN | 1957-42, cat. 6171 | U.S.A | California: San Diego Yacht Club wharf | ~32°43ʹ01ʺN, 117°13ʹ43ʺW | Google | W. L. Flawe | 6 March 1956 | wharf |  |  |  |  | SLA |
| NMNH | 218558 | U.S.A | California: San Diego Harbor | ~32°40ʹ18ʺN, 117°08ʹ39ʺW | Google | T. E. Bowman | 30 Dec. 1948 | cable crossing structure and/or buoy |  |  |  |  | MAR, SLA |
| NHMLA | Barnard 12 | U.S.A | California: between Ensenada and Santa Barbara | ~31°52ʹN, 116°35ʹW”to to 34°25ʹN, 119°41ʹW | Google | J. L. Barnard |  | harbour |  |  |  |  | MOR |

Supplementary Table S10. Latitudinal transect along the Pacific coast of North America showing habitats and substrates where more than one species of *Jassa* was found. Collections were by hand at shallow subtidal depth unless indicated otherwise. Species names are abbreviated by their first three letters.

| Coordinates | Location | Sub-station | Habitat | Species | Substrate |
| --- | --- | --- | --- | --- | --- |
| 48°50.4ʹN,  125°12.5ʹW | British Columbia: Vancouver Island: Seppings Island | 87-12-3 | Bedrock on exposed coast | CAR | low encrusting sponge, hydroid, *Ulva* |
|  |  | 87-12-4 |  | CAR | filamentous bryozoans, *Ulva*, red algae (*Gymnogongrus platyphyllus* Gardner) |
|  |  | 87-12-7 |  | CAR | coralline algae |
|  |  | 87-12-8 |  | CAR | *Gigartina* holdfast |
|  |  | 87-12-9 |  | MOR | *Rhodymenia* |
|  |  | 87-12-10 |  | MOR | *Corallina* |
|  |  |  |  |  |  |
| 48°50.2ʹN, 125°08.5ʹW | British Columbia: Vancouver Island: Barkley Sound: Brady’s Beach | 87-10-1 | Bedrock tidepool on exposed coast | CAR | colonial ascidians |
|  |  | 87-10-2 |  | STA | hydroid |
|  |  |  |  |  |  |
| 48°50.2ʹN, 125°08.0ʹW | British Columbia: Vancouver Island: Barkley Sound: Bamfield Marine Sciences Centre | 87-11-2 | Floating dock | STA | *Sargassum* |
|  |  | 87-11-3 |  | MAR | hydroid |
|  |  |  |  |  |  |
| 48°25ʹN, 123°20ʹW | British Columbia: Vancouver Island: Victoria harbour | 87-7-1 | Floating dock | MAR | hydroids, *Enteromorpha, Laminaria saccharina* |
|  |  | 87-7-2 |  | MAR | hydroids, *Enteromorpha, Laminaria saccharina* |
|  |  | 87-7-3 |  | MAR, STA | hydroids, *Enteromorpha, Laminaria saccharina* |
|  |  |  |  |  |  |
| 44°29ʹN, 124°05ʹW | Oregon: Seal Rocks | O-8-1 | Bedrock on exposed coast | STA, BOR | red filamentous algae |
|  |  | O-8-2 |  | BOR | red filamentous algae |
|  |  | O-8-3 |  | BOR | red filamentous algae |
|  |  | O-8-4 |  | BOR | red and brown filamentous algae |
|  |  | O-8-6 |  | BOR | red algae |
|  |  | O-8-10 |  | BOR | mixed algae |
|  |  | O-8-12 |  | BOR | colonial ascidian |
|  |  | O-8-15 |  | BOR | red cord-like algae |
|  |  | O-8-16 |  | SLA, BOR | *Phyllospadix* |
|  |  | O-8-19 |  | STA, BOR | laminarian |
|  |  | O-8-21 |  | BOR | red algae |
|  |  |  |  |  |  |
| 43°20ʹN, 124°23ʹW | Oregon: Sunset Bay | O-6-2 | Bedrock on exposed to semi-protected coast | STA | red algae |
|  |  | O-6-3 |  | MOR | *Phyllospadix* |
|  |  | O-6-8 |  | CAR | kelp holdfasts |
|  |  |  |  |  |  |
| 41°45ʹN, 124°11ʹW | California: Crescent City: outer harbor | C-2-5 | Rock spit on exposed coast | BOR | red algae on exposed side of boulder spit |
|  |  | C-2-6 |  | BOR | red algae on exposed side of boulder spit |
|  |  | C-2-9 |  | STA, BOR | hydroids and bryozoans on protected side of boulder spit |
|  |  |  |  |  |  |
| 37°29.5ʹN, 122°30ʹW | California: Pillar Point Harbor | C-8-1 | Floating dock | MAR, SLA | hydroids |
|  |  |  |  |  |  |
| 35°27ʹN, 120°54ʹW | California: Cayucos | C-12-1 | Bedrock on exposed coast | SLA | *Phyllospadix* |
|  |  | C-12-9 |  | BOR | *Phyllospadix* |
|  |  |  |  |  |  |
| 35°22ʹN, 120°52ʹW | California: Morro Bay marina | C-13-1 | Floating dock | STA, SLA | dock substrate |
|  |  | C-13-6 |  | SLA | *Ulva* |
|  |  | C-13-7 |  | SLA | red algae on rope suspended from dock. Mouth of Morro Bay |
|  |  | C-13-9 |  | SLA | red algae, south side |

Supplementary Table S11. Observations on the uses of appendages by living *J. marmorat*a (MAR), *J. falcata* (FAL) and *J. slatteryi* (SLA).

|  |  |  |  |
| --- | --- | --- | --- |
| Function | Observation | Species | Source |
| Suspension feeding | Antennae splayed so that the long setae form a net. Antenna 2 flagellae tremble in the water, presumably sensing. Antennal flagella flicked into the mouth independently of each other or cleaned by the medial setae on the propodus of gnathopod 1. | MAR, FAL | pers. obs. in laboratory and large aquaria |
| Suspension feeding | As for *J. marmorata* | FAL | pers. obs. in laboratory |
| Deposit feeding | Substrate touched by the tips of the antenna 2 flagella and then flicked into the mouth. | MAR | pers. obs. in laboratory and large aquaria |
| Deposit feeding | Antennae 2 flagella poked into crevices in the substratum. Detritus picked up with gnathopod 1 or maxilliped. | FAL | pers. obs. in laboratory |
| Prey | Hatchling of the same species.  Brine shrimp. | MAR | pers. obs. in laboratory |
| Prey capture | A brine shrimp larva captured passively in the antennal net triggered the antennae to be pulled tightly together and down, resulting in the shrimp being held by the setae. The antennae were then pulled down to the buccal region and the shrimp picked up by the medial surface of the gnathopod 1ʹs. The carpus, propodus and dactyl were rotated flat to provide a plate-like surface to the maxillipeds, which chewed the shrimp, with the mandibular palps moving down to assist. Another larva that touched an antenna was flicked and grabbed by the gnathopod 1ʹs, wherein it was consumed as above. | MAR | pers. obs. in laboratory |
| Buccal mass movements | Maxilliped inner plate macerates; then maxilla 2 moves back and forth (anterior to posterior and back); finally, mandible moves in and out (lateral to medial and back); upper lip moves anterior to posterior and back in synchrony with the mandible; maxilla 1 moves in and out in synchrony with the maxilliped. | FAL | pers. obs. in laboratory |
| Head cleaning | Gnathopods 1 can be extended upwards to cover the eyes, thus cleaning the side of the head (but not the top) with the medial facial setae. Mandibular palp also used in cleaning. | FAL | pers. obs. in laboratory |
| Antennal cleaning | Antennae 1 and 2 pulled down to buccal mass, where flagella cleaned by mandibular palp and maxilliped palp. Medial surface of gnathopod 1ʹs may also be used to clean the flagella in concert with the palps. Flagella cleaning is the most frequently used method of antennal cleaning. | MAR | pers. obs. in laboratory |
| Antennal cleaning | Full length of antennae cleaned by bending the head down and bringing both gnathopod 2ʹs up to scrape the full length of each side of the antennae. The gnathopod 2ʹs are then brought to the buccal mass, where they are cleaned by the mandibular palp and maxilliped palp. Gnathopod 1ʹs also used to clean the full length of the antennae. The propodus and carpus can be twisted flat and held like a plate under the maxillipeds, where they can then be scraped clean of detritus. | MAR | pers. obs. in laboratory |
| Antennal cleaning | Uropods brought under body, head bent, dorsal (spiny) surface of uropods scraped along the length of the posterior (setose) surface of antennae 1 and 2. | MAR | pers. obs. in laboratory |
| Antennal cleaning | Antennae 1 and 2 pulled dorsally between the gnathopod 1ʹs and maxilliped, the head able to tilt upwards, thus extending the antennae upwards. | FAL | pers. obs. in laboratory |
| Tube building | Peraeopods 3 and 4 are inactive while resting but when tube building, the dactyls are poked here and there at the tube. Thread secretion cannot be seen. Tube is flexible, open at both ends, and has detritus incorporated. Hatchlings commence tube building sooner than larger juveniles after dislodgement, followed by subadults and females. | MAR | pers. obs. in laboratory |
| Tube occupation | Resting position is with the urosome tucked under the thorax, the pleopods slowly or rapidly beating, and the antennae splayed. Will extend body out of the tube to as far as the posterior of gnathopod 2. Pleopods beat bottom to top (i.e., pleopod 3, then 2, then 1), resulting in a current toward the head. Peraeopods 5-7 and uropods grab inner face of tube and are used to move the body inside the tube. Peraeopods 3, 4 step forward in concert with peraeopod 5-7 and uropod pushing. Antennae 2 bend over face of tube and pat it. | MAR, FAL, SLA | pers. obs. in laboratory |
| Tube as a food supply | Tube occupant will consume portions of its tube, using the gnathopod 1 to pull off small amounts from the edge of the opening. | FAL | pers. obs. in laboratory |
| Tube positioning | *Ulva*, filamentous red algae: flat on surface of algal frond  Hydroid, filamentous red algae: at the base of a branch  Detritus mass: interior of mass  Aquarium wall: 90°to surface | MAR, FAL | pers. obs. in laboratory and large aquaria |
| Swimming | Antennae 1 and 2 are held straight in front, coxae are bent close to the body and the urosome is fully extended, to give a streamlined appearance. When released near a substratum, all individuals swam to the substratum, not away from it. | MAR, SLA | pers. obs. in laboratory and in the field |
| Settling | If suspended in the water column, sinking is by spreading the antennae and sinking with body flaccid, as like a parachute, posterior first. | MAR | pers. obs. in laboratory, large aquaria and in the field |
| Resting | Gnathopod 2 can be pulled up to the body so that the anterior surface of the propodus fits into a groove along the anterior of the basis. | FAL | pers. obs. in laboratory |
| Agonism | Antennae 2 tips of flagella are poked at the competitor/aggressor and the gnathopod 2ʹs are displayed and used for grasping. Non-thumbed males lose to thumbed males. Females lose to non-thumbed males. Thumbed males attend females. | MAR | pers. obs. in laboratory |

Supplementary Table S12. Behaviour of *J. slatteryi* and *J. marmorata* two days after introduction to glass bowls of seawater placed on a flowing seawater table at Moss Landing Marine Laboratories, California. Live animals were collected in nearby Moss Landing harbor. Substrate choice is that on which the occupied tube was attached to or, if no tube, the substrate on which the free living amphipod was on at the time of observation.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Made a tube | Did not make a tube | Substrate | |
| *Jassa slatteryi* |  |  | *Ulva* | Hydroid |
| Adult female | 7 | 1 | 1 | 7 |
| Juvenile female | 1 | 0 | 0 | 1 |
| Juvenile male | 2 | 1 | 1 | 2 |
| Adult (thumbed) male | 2 | 4 | 2 | 3 |
|  |  |  |  |  |
| *Jassa marmorata* |  |  |  |  |
| Adult female | 5 | 1 | 2 | 4 |
| Juvenile female | 0 | 0 | 0 | 0 |
| Juvenile male | 3 | 0 | 0 | 3 |
| Adult (thumbed) male | 0 | 0 | 0 | 0 |

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1. Reichert and Buchholz (2006) indicated that *J. marmorata* was not present at Helgoland in a 1984 survey but was present in a 2002 survey. However, *J. marmorata* was found along with *J.* *falcata* in samples studied by Nair and Anger (1979) and Nair (1980) (see Conlan 1990). Beermann & Franke (2011) found *J. herdmani* there as well. [↑](#footnote-ref-1)
2. identification confirmed from published CO1 sequence in Plaisance *et al.* (2011b) as Amphipoda sp. LPdivOTU65. [↑](#footnote-ref-2)
3. Possibly also *Hemijassa goniamera* as this was only recently transferred out of the genus *Jassa* by Conlan (submitted) [↑](#footnote-ref-3)