Supplementary table 1. Source and details of the individual species experimental data used for analysis of cercarial swimming.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Species | Origin | Morphotype | Target host | Host-searching behaviour | Habitat | Speed (mm/sec) | Temperature (ºC) | Ref |
| *Schistosoma mansoni* | Puerto Rico [1] (York) | Furcocercariae | Human | Active waiting | Freshwater | 2.1 | 22 | [1] |
|  | Puerto Rico [2] (York) | Furcocercariae | Human | Active waiting | Freshwater | 0.75 | 24 | [2] |
|  | Puerto Rico [3] (York) | Furcocercariae | Human | Active waiting | Freshwater | 1.4 | 27 | [3] |
|  | Puerto Rico [4] (York) | Furcocercariae | Human | Active waiting | Freshwater | 0.73 | 25 | [4] |
|  | Puerto Rico  [5] (UCSF) | Furcocercariae | Human | Active waiting | Freshwater | 0.7 | n/k | [5] |
|  | Puerto Rico [6] | Furcocercariae | Human | Active waiting | Freshwater | 0.46 | 25 | [6] |
|  | Liberia | Furcocercariae | Human | Active waiting | Freshwater | 1.4 | n/k | [7] |
|  | Brazil | Furcocercariae | Human | Active waiting | Freshwater | 1.04 | 25 | [8] |
| *Trichobilharzia ocellata* | Germany | Furcocercariae | Bird (aquatic) | Active waiting | Freshwater | 3.4 | 25 | [9] |
| *Bilharzia polonica* | Finland | Furcocercariae | Bird (aquatic) | Active searching | Freshwater | 0.9 | 20 | [10] |
| *Diplostomum spathaceum* | Germany | Furcocercariae | Fish | Active waiting | Freshwater | 3.7 | n/k | [21] |
|  | England | Furcocercariae | Fish | Active waiting | Freshwater | 1.25 | 22 | [11] |
| *Diplostomum pseudospathaceum* | Finland | Furcocercariae | Fish | Active waiting | Freshwater | 3.9 | 20 | [10] |
| *Posthodiplostomum cuticola* | Germany | Furcocercariae | Fish | Active waiting | Freshwater | 9.0 | 20 | [14] |
| *Transversotrema patialense* | Malaysia | Furcocercariae | Fish | Active waiting | Freshwater | 25.9 | n/k | [13] |
| *Ichthyocotylurus variegatus* | Finland | Furcocercariae | Fish | Active waiting | Freshwater | 3.9 | 20 | [10] |
| *Cercaria spinulosa* | Finland | Furcocercariae | Fish | Active waiting | Freshwater | 1.1 | 20 | [10] |
| *Aporocotylid* sp. 1 | New Zealand | Furcocercariae | Fish | Active waiting | Freshwater | 3.4 | 16 | [12] |
| *Apatemon* sp. | New Zealand | Furcocercariae | Fish | Active searching | Freshwater | 3.2 | 16 | [12] |
| *Proterometra macrostoma* | USA | Furcocercariae | Fish | Prey mimicry | Freshwater | 7.0 | 25 | [15] |
| *Alaria arisaemoides* | Canada | Furcocercariae | Tadpoles (Amphibians) | Active waiting | Freshwater | 10.0 | 21 | [16] |
| *Australapatemon minor* | Germany | Furcocercariae | Leech | Active waiting | Freshwater | 1.6 | 25 | [9] |
|  | England | Furcocercariae | Leech | Active waiting | Freshwater | 1.08 | 22 | [11] |
| *Australapatemon burti* | Finland | Furcocercariae | Leech | Active waiting | Freshwater | 0.9 | 20 | [10] |
| *Australapatemon* sp. | Finland | Furcocercariae | Leech | Active searching | Freshwater | 1.2 | 20 | [10] |
| *Cotylurus flabelliformis* | USA | Furcocercairae | Mollusc | Active searching | Freshwater | 0.98 | 26 | [17] |
| *Cotylurus brevis* | Finland | Furcocercariae | Mollusc | Active searching | Freshwater | 2.4 | 20 | [10] |
| *Echinostoma revolutum* | Germany | Echinostome | Mollusc/ Tadpoles | Active searching | Freshwater | 1.3 | 25 | [9] |
| *Echinostoma caproni* | Egypt | Echinostome | Mollusc/ Tadpoles | Active searching | Freshwater | 2.23 | 25 | [18] |
| *Echinostoma* sp.  (*Cercaria spinifera*) | Germany | Echinostome | Mollusc/ Tadpoles | Active searching | Freshwater | 3.2 | 25 | [9] |
| *Echinostoma* sp.  (of Fulia) | Switzerland | Echinostome | Mollusc | Active searching | Freshwater | 4.0 | n/k | [19] |
| *Echinoparyphium recurvatum* | England [1] (York) | Echinostome | Mollusc/ Tadpoles | Active searching | Freshwater | 1.33 | 19 | [20] |
|  | England [2]  (Egham) | Echinostome | Molluscs/ Tadpoles | Active searching | Freshwater | 0.84 | 22 | [11] |
| *Echinoparyphium aconiatum* | Switzerland | Echinostome | Mollusc | Active searching | Freshwater | 1.82 | n/k | [19] |
| *Echinoparyphium* sp. | Germany | Echinostome | Mollusc | Active searching | Freshwater | 2.5 | n/k | [21] |
| *Himasthla elongata* | White sea [1] | Echinostome | Mollusc | Active searching | Marine | 2.4 | 15 | [22] |
|  | White sea [2] | Echinostome | Mollusc | Active searching | Marine | 2.2 | 20 | [23] |
| *Himasthla rhigedana* | USA (California salt marsh) | Echinostome | External surface of crabs/molluscs | Active searching | Marine | 3.6 | 24 | [23] |
| *Hypoderaeum conoideum* | Germany | Echinostome | Molluscs/ Tadpoles | Active searching | Freshwater | 1.6 | 25 | [9] |
|  | Switzerland | Echinostome | Molluscs/ Tadpoles | Active searching | Freshwater | 1.1 | n/k | [19] |
| *Hypoderaeum* sp. | England | Echinostome | Molluscs | Active searching | Freshwater | 0.8 | 15 | [24] |
| *Cercaria ogunis* | Nigeria | Echinostome | Molluscs/ Tadpoles | Active searching | Freshwater | 3.0 | n/k | [26] |
| *Cryptocotyle lingua* | Northern Ireland [1] | Parapleurophocercous | Fish | Active waiting | Marine | 1.6 | 15 | [26] |
|  | Northern Ireland [2] | Parapleurophocercous | Fish | Active waiting | Marine | 2.7 | 20 | [27] |
|  | Northern Ireland [3] | Parapleurophocercous | Fish | Active waiting | Marine | 1.25 | 20 | [28] |
|  | Northern Ireland [4] | Parapleurophocercous | Fish | Active waiting | Marine | 1.2 | 15 | [29] |
|  | Northern Ireland [5] | Parapleurophocercous | Fish | Active waiting | Marine | 2.6 | 15 | [30] |
|  | White sea [1] | Parapleurophocercous | Fish | Active waiting | Marine | 4.8 | 15 | [22] |
|  | White sea [2] | Parapleurophocercous | Fish | Active waiting | Marine | 0.48 | 20 | [31] |
| *Haplorchis pumilio* | Taiwan | Parapleurophocercous | Fish | Active waiting | Freshwater | 2.0 | 25 | [32] |
| *Cercaria caribbea LXXI* | Jamaica | Parapleurophocercous | Fish | Prey mimicry | Marine | 2.0 | 25 | [33] |
| *Plagiochis muris* | Japan | Xiphidiocercariae | Arthropods | Active searching | Freshwater | 0.28 | 20 | [34] |
| *Plagiorchis elegans* | England | Xiphidiocercariae | Arthropods | Active searching | Freshwater | 0.43 | 19 | [20] |
| *Maritrema poulini* | New Zealand | Xiphidiocercariae | Arthropods | Active searching | Freshwater | 0.4 | 16 | [12] |
| *Maritrema subdolum* | White sea | Xiphidiocercariae | Arthropods | Active searching | Marine | 0.35 | 15 | [22] |
| *Plerogenoides medians* | Germany | Xiphidiocercariae | Arthropods | Active searching | Freshwater | 0.25 | n/k | [35] |
| *Opisthioglyphe ranae* | Poland | Xiphidiocercariae | Molluscs | Active searching | Freshwater | 1.1 | 20 | [36] |
| *Probolocoryphe lanceolata* | USA  (Florida) | Xiphidiocercariae | Arthropods | Active searching | Marine | 0.59 | 24 | [37] |
| *Cercaria parvicaudata* (*Renicola* sp.) | White sea | Xiphidiocercariae | Molluscs | Active searching | Marine | 0.34 | 15 | [22] |
| *Centrocestus formosanus* | Taiwan | Pleurophocercous | Fish | Active searching | Freshwater | 0.5 | 25 | [32] |
| *Euhaplorchis* sp. | USA (Florida) | Pleurophocercous | Fish | Active waiting | Marine | 0.66 | 24 | [37] |
| *Cercaria opacocorpa* | USA | Pleurophocercous | Fish | Active waiting | Freshwater | 7.1 | 25 | [38] |
| *Fasciola hepatica* | USA | Gymnocephalous | Free-living on plant surface | Active searching | Freshwater | 1.37 | 23 | [39] |
| *Cercaria E* | USA | Gymnocephalous | n/k | Active searching | Marine | 8.0 | n/k | [40] |
| *Echinostephilla patella* | Northern Ireland | Megalurous | Mollusc | Active searching | Marine | 0.9 | 20 | [28] |
| *Parorchis acanthus* | Wales | Megalurous | External surface molluscs/amphipods | Passive waiting | Marine | 0.1 | 22 | [41] |
| *Coitocaecum parvum* | New Zealand | Cotylocercous | Amphipod | Passive waiting | Freshwater | 1.0 | 16 | [12] |
| *Cercaria setifera* | France | Trichocercous | Benthic invertebrates | Active searching | Marine | 3.6 | n/k | [42] |
| *Cercaria F* | USA | ‘Hugh-tailed monostome’ | Fish | Prey mimicry | Marine | 3.5 | n/k | [40] |

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