

Supplementary Materials Table S3. Antarctic lakes investigated for the presence of the Antarctic clade (see Fig. 1b) by isolation of strains and/or nested PCR with specific primers. All lakes are located in Byers Peninsula (Livingston Island) or in Hope Bay (Antarctic Peninsula), all in the maritime Antarctica. Note that not all samples were investigated by both methods. The lakes were sampled in 2004, 2007, and/or 2009 during austral summer (January and February)

| Lake | Site | Habitat type | Temp. (°C) | pH | Conductivity [$\mu\text{S cm}^{-1}$] | Absorption (250 nm) | Geographic Coordinates | | Detection of Antarctic Clade | | |
|-----------------|------|------------------------------------|---------------|-----|---|------------------------|------------------------|------------|------------------------------|------------|--------------|
| | | | | | | | Latitude | Longitude | Method | Year | |
| Lake Limnopolar | B.P. | Antarctic mid-depth lake (inland) | 4.5 | 7.5 | 67 | 0.0103 | 62°38'53"S | 61°06'18"W | pos. | Cult., PCR | 2004, 07, 09 |
| Lake Somero | B.P. | Antarctic shallow lake (inland) | 5.4 | 7.2 | 70 | 0.0278 | 62°38'54"S | 61°06'41"W | pos. | Cult., PCR | 2007, 09 |
| Lake Maderos | B.P. | Antarctic shallow lake (coastal) | 3.0 | 7.4 | 257 | 0.0402 | 62°39'46"S | 61°10'37"W | pos. | Cult. | 2009 |
| Lake Refugio | B.P. | Antarctic shallow lake (coastal) | 4.4 | 8.5 | 130 | 0.0649 | 62°39'47"S | 61°00'42"W | pos. | Cult., PCR | 2007, 09 |
| Lake Chica | B.P. | Antarctic mid-depth lake (inland) | 5.7 | 6.8 | 45 | 0.0206 | 62°39'27"S | 61°06'33"W | pos. | Cult., PCR | 2004, 27, 09 |
| Lake Domo | B.P. | Antarctic mid-depth lake (inland) | 2.8 | 7.0 | 26 | 0.0120 | 62°38'53"S | 60°58'55"W | pos. | Cult. | 2009 |
| Lake Midge | B.P. | Antarctic deep (9 m) lake (inland) | 4.6 | 6.9 | 68 | 0.0128 | 62°37'49"S | 61°05'42"W | pos. | PCR | 2007 |
| Lake Chester | B.P. | Antarctic mid-depth lake (inland) | 5.6 | 6.9 | 52 | 0.0258 | 62°38'09"S | 61°05'55"W | pos. | PCR | 2007 |
| Lake Turbio | B.P. | Antarctic mid-depth lake (inland) | 5.1 | 6.6 | 58 | 0.0287 | 62°39'05"S | 61°05'16"W | pos. | PCR | 2007 |
| Lake Escondido | B.P. | Antarctic mid-depth lake (inland) | 4.1 | 6.7 | 52 | n.a. | 62°38'36"S | 61°03'34"W | pos. | PCR | 2007 |
| Lake Kokotxas | B.P. | Antarctic shallow lake (inland) | 4.0 | 7.0 | 51 | n.a. | 62°35'52"S | 61°10'02"W | pos. | PCR | 2007 |
| Lake Boeckella | H.B. | Antarctic mid-depth lake (inland) | 0.2 | 6.5 | 19 | n.a. | 63°23'59"S | 57°00'00"W | pos. | PCR | 2004 |
| Lake Encantado | H.B. | Antarctic shallow lake (coastal) | 0.1 | 6.6 | 67 | n.a. | 63°24'36"S | 57°02'24"W | pos. | PCR | 2004 |
| Lake Esperanza | H.B. | Antarctic mid-depth lake (coastal) | 1.0 | 6.4 | 91 | n.a. | 63°24'36"S | 57°01'48"W | neg. | PCR | 2004 |
| Lake Flora | H.B. | Antarctic shallow lake (coastal) | 3.0 | 6.3 | 32 | n.a. | 63°24'36"S | 57°02'24"W | neg. | PCR | 2004 |
| Pingüi Pond | H.B. | Antarctic pond (coastal) | 0.8 | 7.1 | 1860 | n.a. | 63°23'59"S | 57°00'36"W | neg. | PCR | 2004 |

B.P., Byers Peninsula, Livingston Island; H.P., Hope Bay, Antarctic peninsula; Temp., water temperature; pos., positive detection; neg., negative detection; n.a. = not available