

Supplementary Materials:

Table S1. List of primer pairs used for amplification of SSU rDNA segments, ITS region, and LSU rDNA sequences.

Primer Name	Primer Sequence	Reference
EukA	5' -CTG GTT GAT CCT GCC AG-3'	[36]
G18R	5' -GCA TCA CAG ACC TGT TAT TG-3'	[37]
570F	5' -GTA ATT CCA GCT CCA ATA GC-3'	[38]
EukB	5' -TGA TCC TTC TGC AGG TTC ACC TAC-3'	[36]
ITSF2	5' -TAC GTC CCT GCC CTT TGT AC-3'	[37]
LSU500R	5' -CCC TCA TGG TAC TTG TTT GC-3'	[37]
D1RF	5' -ACC CGC TGA ATT TAA GCA-3'	[39]
1483R	5' -GCT ACT ACC AAG ATC TGC-3'	[40]

Table S2. List of species used in constructing nuclear SSU ribosomal (r) DNA phylogenetic trees. Genbank accession numbers are listed to the right of each species.

Species	Strain no.	Accession number	Nm sizes (bp)	Origin
<i>Oxyrrhis marina</i> KRR	OMKRR_1005	MZ519401	1692	This Study
<i>Oxyrrhis marina</i> SH	OMSH_1111	MZ519402	1690	
<i>Oxyrrhis marina</i> MS	OMMS_1004	MZ519428	1696	
<i>Oxyrrhis marina</i> GS	OMGS_0105	MZ519429	1675	
<i>Oxyrrhis maritima</i> JJ	OMJJ_1305	MZ519401	1671	
<i>Oxyrrhis maritima</i> HD	OMHD_1305	MZ536901	1672	
<i>Noctiluca scintillans</i>		GQ380592.1	1788	Hong Kong
<i>Perkinsus marinus</i>		AF126013.1	1805	USA
<i>Plasmodium falciparum</i>	MAL10/350	MF155937.1	1628	Singapore
<i>Tetrahymena pyriformis</i>	FL191	EF070254.1	1635	Australia
<i>Protocruzia adherens</i>	Boccale	AY217727.1	1752	
<i>Ectocarpus siliculosus</i>	3477	AY307398.1	1728	
<i>Schizochytrium aggregatum</i>	ATCC 28209	AB022106.1	1677	UK
<i>Oxyrrhis</i> sp	WHOI_LI1-5-6	AF330215.1	1759	
<i>Gonyaulax spinifera</i>	GSTL1	AF052190.1	1795	Egypt
<i>Sarcocystis fusiformis</i>	Bb3.4 clone 2	KR186116.1	1879	
<i>Eimeria nieschulzi</i>		U40263.1	1797	Nepal
<i>Theileria parva</i>		L02366.1	1742	Australia
<i>Cryptosporidium parvum</i>	H7	AF108865.1	1753	
<i>Colpodella angusta</i>		KU159286.1	1773	
<i>Halteria grandinella</i>		AY007441.1	1730	USA
<i>Oxytricha nova</i>		X03948.1	1771	Pakistan
<i>Paramecium tetraurelia</i>		EF502045.1	1748	
<i>Colpoda inflata</i>	ATCC 30917	M97908.1	1788	Denmark
<i>Tracheloraphis</i> sp		L31520.1	1598	
<i>Blepharisma americanum</i>		M97909.1	1724	USA
<i>Scrippsiella trochoidea</i>	CCMP2271	HM483396.1	1793	
<i>Heterocapsa rotundata</i>	CCCM 680	AF274267.1	1752	Korea
<i>Symbiodinium minutum</i>	CCMP830	LK934670.1	1691	
<i>Alexandrium tamarense</i>	HY970328M	AY831406.1	1799	Korea
<i>Lingulodinium polyedrum</i>	LPCQ-1	JQ616824.1	1715	Mexico
<i>Gymnodinium catenatum</i>	CCMP1940	DQ785883.1	1803	Spain
<i>Karlodinium</i> sp	KAMS0708	FN357291.1	1761	Korea

<i>Karenia brevis</i>	CCMP718	EF492501.1	1795
<i>Amphidinium carterae</i>	CCMP121	EF057407.1	1701

Table S3. List of species used in constructing nuclear ITS1-5.8S-ITS2 phylogenetic trees. Genbank accession numbers are listed to the right of each species.

Species	Strain no.	Accession number	Nm sizes (bp)	Origin
<i>Oxyrrhis marina</i> KRR	OMKRR_1005	MZ519401	1692	This Study
<i>Oxyrrhis marina</i> SH	OMSH_1111	MZ519402	1690	
<i>Oxyrrhis marina</i> MS	OMMS_1004	MZ519428	1696	
<i>Oxyrrhis marina</i> GS	OMGS_0105	MZ519429	1675	
<i>Oxyrrhis maritima</i> JJ	OMJJ_1305	MZ519401	1671	
<i>Oxyrrhis maritima</i> HD	OMHD_1305	MZ536901	1672	
<i>Oxyrrhis maritima</i>		KC012387.1	353	Malta
<i>Oxyrrhis maritima</i>		KC012384.1	354	Spain
<i>Oxyrrhis maritima</i>		KC012383.1	354	Spain
<i>Oxyrrhis maritima</i>		KC012374.1	353	Greece
<i>Oxyrrhis maritima</i>		KC012372.1	352	Greece
<i>Oxyrrhis maritima</i>		KC012370.1	353	Greece
<i>Oxyrrhis maritima</i>		KC012357.1	351	France
<i>Oxyrrhis maritima</i>		KC012373.1	353	Greece
<i>Oxyrrhis marina</i>	CCAP1133/3	AY566418.1	1603	UK
<i>Oxyrrhis marina</i>	CCAP1133/4	AY566417.1	1598	UK
<i>Oxyrrhis marina</i>	Faro	FJ853662.1	390	UK
<i>Oxyrrhis marina</i>	Mostei	FJ853670.1	390	Portugal
<i>Oxyrrhis marina</i>	Sao Ro	FJ853679.1	390	Portugal
<i>Oxyrrhis marina</i>	Bahar	FJ853668.1	405	UK
<i>Oxyrrhis marina</i>	Naxos	FJ853674.1	394	Greece
<i>Oxyrrhis marina</i>	NaplesA	FJ853671.1	392	Italy
<i>Oxyrrhis marina</i>	NaplesC	FJ853673.1	390	Italy
<i>Oxyrrhis marina</i>	Okinaw	FJ853675.1	393	Japan
<i>Oxyrrhis marina</i>	CCMP1739	AY566413.1	432	USA
<i>Oxyrrhis marina</i>	CCMP605	AY566414.1	431	USA
<i>Oxyrrhis marina</i>	CCMP604	AY566415.1	431	USA
<i>Oxyrrhis marina</i>	CCMP1795	AY566411.1	431	USA
<i>Oxyrrhis marina</i>	CCMP1788	AY566412.1	431	UK
<i>Oxyrrhis marina</i>	Gunsan	FJ853666.1	390	Korea
<i>Oxyrrhis marina</i>	Porto	FJ853677.1	405	Greece
<i>Oxyrrhis marina</i>	Isle	AY566410.1	430	UK
<i>Oxyrrhis marina</i>	Plymouth	FJ853676.1	390	UK
<i>Toxoplasma gondii</i>	CB4	JX456456.1	428	China
<i>Tetrahymena thermophila</i>	ATCC 30382	JN547815.1	461	
<i>Protocruzia adherens</i>		AY217728.1	504	
<i>Oxytricha trifallax</i>		AJ286798.1	680	
<i>Plasmodium falciparum</i>	CAMP	U21939.1	416	
<i>Cryptosporidium parvum</i>	KSU-1	AH006572.2	1162	
<i>Perkinsus marinus</i>		KJ458987.1	561	Mexico
<i>Perkinsus marinus</i>		JQ266250.1	665	Mexico
<i>Noctiluca scintillans</i>		KR607100.1	535	
<i>Besnoitia bennetti</i>		MG652473.1	938	Belgium