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Checklist of phytoplankton in the eastern Adriatic Sea

DAMIR VILIČIĆ[1]*, IVONA MARASOVIĆ[2], DANIELA MIOKOVIĆ[3]

[1] University of Zagreb, Faculty of Science, Department of Botany, Rooseveltov trg 6, PO Box 333, 10000 Zagreb, Croatia

[2] Institute of Oceanography and Fisheries, PO Box 500, 21000 Split, Croatia

[3] Institute Rudjer Bošković, G. Paliage 5, 23000 Rovinj, Croatia

According to recent insights, the phytoplankton of the eastern Adriatic Sea is composed of 888 determined species. The diatoms were composed of 518 species (330 pennates, 174 centric diatoms), dinoflagellates 264, prymnesiophytes 101, chrysophyceae 2, raphidophyceae 1 and euglenophyceae 2 species. The list is accompanied by data on the general distribution of species in the northern, central and southern part of the eastern Adriatic Sea. The sources of data were samples collected in naturally eutrophic areas (bays, highly stratified karstic estuaries), in areas with anthropogenic influence (harbours), as well as in the oligotrophic southern Adriatic. The old published data were supplemented with more recent infromation from the period 1981–2000.

Key words: Phytoplankton, checklist, Adriatic Sea

Introduction

Research into phytoplankton in the Adriatic Sea started at the beginning of the twentieth century in the northern part in the vicinity of research centers such as Trieste, Venice and Rovinj (in Istria). During this time several expeditions were carried out along the Adriatic (ZAVODNIK 1998), providing the first data on the hydrography and plankton of the eastern Adriatic sea (SCHILLER 1913, 1925a, b; SCHRÖDER 1911; KAMPTNER 1940). A checklist of the NE and middle Adriatic phytoplankton determined up to the 1970's was published as an internal document by KERŽAN and ŠTIRN (1976). Modern quantitative phytoplankton research in the NE Adriatic was carried out by Revelante, who later on completed and published a checklist of phytoplankton for this part of the Adriatic (REVELANTE 1985). Research into phytoplankton was continued in the middle Adriatic (ERCEGOVIĆ 1936, PUCHER-PETKOVIĆ 1966). MARASOVIĆ et al. 1990). A more recent account of the taxonomic composition of phytoplankton has been mostly published in the frame of ecological research in the northern (REVELANTE and GILMARTIN 1980, 1985; REVELANTE et al. 1984; HONSELL and CABRINI 1990, 1991; HONSELL et al. 1992; HONSELL 1993), middle (PUCHER-PETKOVIĆ and MARASOVIĆ 1980, 1982, 1987; MARASOVIĆ 1983; MARASOVIĆ and PUCHER-PETKOVIĆ 1992;

* Corresponding author: dvilici@zg.biol.pmf.hr

VILIČIĆ et al. 1997, 2000; BAKRAN-PETRICIOLI et al. 1998) and southern Adriatic (VILIČIĆ 1985, 1998; VILIČIĆ et al. 1994, 1995a, b, 1998; SOCAL et al. 1999). The phytoplankton composition from the western (Italian) coastal Adriatic has been analyzed in its northern and middle part (TOLOMIO 1976, TOLOMIO et al. 1976, HONSEEL and CABRINI 1991, HONSELL et al. 1992, HONSELL 1993, SIDARI et al. 1995, CAROPPO 2000) and the southern part (CAROPPO et al. 1999).

The scope of this paper is to present a checklist of phytoplankton (including some heterotrophic genera such as *Protoperidinium* and *Hermesinum*, which are usually analyzed by phytoplanktologists), determined along the eastern part of the Adriatic Sea. The majority of taxa belong to microphytoplankton (cells/colonies in the size range 20–200 μm). The list of nanoplankton (cells in the size range 2–20 μm) has not been completed to date.

Investigated area

The Adriatic Sea is an elongated basin (Fig. 1), the northern part of the Mediterranean, with three distinctive sections, the northern, middle and southern part and different water masses being recognized. The eastern coastal region is influenced by the north-westerly ingoing current from the Ionian Sea (characterized by high salinity and low content of nutrients), and fresh-water discharge from oligotrophic karstic rivers.

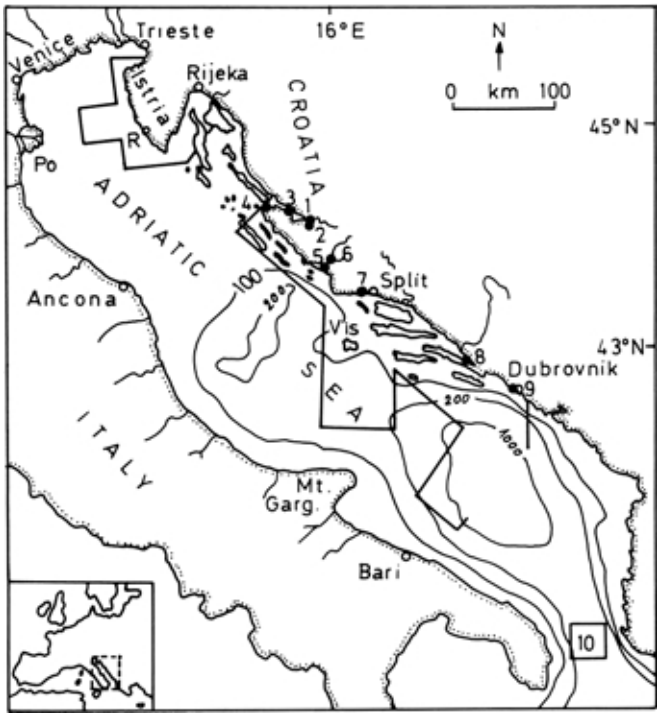

Fig. 1. The sampling areas (indicated by lines) in the eastern part of the Adriatic Sea. Numbers 1 – 10 indicate position of stations: 1 –Novigrad, 2 –Karin, 3 –Ražanac, 4- –Nin, 5 –Šibenik, 6 –Prokljan, 7 –Kaštela Bay, 8 –Mali Ston Bay, 9 –Gruž Bay, 10 – Otranto Strait, R–Rovinj.

Northern Adriatic

The shallow northern part of the Adriatic Sea (<50m deep, <14% and 3% of the total Adriatic surface area and volume, respectively) receives significant freshwater inputs that have a marked positive impact on the productivity (SMODLAKA 1986, GIORDANI et al. 1997), especially in the NW Adriatic basin (CHIAUDANI et al. 1980). The outflow of the Po River, the largest Italian river, provides over 50% of the freshwater input to the northern Adriatic basin. Since the Po valley is one of the most productive agricultural areas in Italy, this river also accounts for about 50% of the total nutrients transported into the northern Adriatic (DEGOBBIS et al. 1986, DEGOBBIS and GILMARTIN 1990). The dominant cyclonic circulation determines a southward nutrient flow along the western coast (ZAVATARELLI et al. 1998). The north Adriatic basin shows typical shallow water characteristics affected by seasonal temperature and salinity variability. Beside the effect of riverine dilution (mainly from the Po River), there is periodical advection of high salinity water from the southern basin influencing the biological characteristics of the system (FRANCO and MICHELATO 1992), mostly along the isobath of 50 m with the front extending approximately from the top of Istria to Ancona (ZORE-ARMANDA et al. 1983, VILIČIĆ 1991, KRŠINIĆ 1995). Since 1988, efforts have been made to understand the nature of the phenomenon of mucilage in the northern Adriatic (DEGOBBIS et al. 1999, 2000).

Middle Adriatic

The physical processes occurring along the two opposing coasts of the Adriatic Sea differ markedly in their characteristics (ORLIĆ et al. 1992). Water exchanges between the semi-enclosed basins of the eastern coast and the open sea are mainly forced by the local wind. Conversely, the shelf area along the western coast is dominated by the Po River outflow, which in winter mostly remains confined to a coastal boundary layer, whereas in summer it spreads to the open sea as well.

The interesting environments along the middle Adriatic are semi-enclosed bays and highly stratified estuaries formed by several small karstic rivers (Krka, Zrmanja). High stratification in estuaries is maintained due to an adequate volume of river discharge and low tides (DYER 1991, LEGOVIĆ 1991, VILIČIĆ et al. 1999). The primary production is influenced by low concentration of nutrients brought by extremely oligotrophic karstic rivers (VILIČIĆ et al. 2001). The effect of eutrophication may be indicated by anthropogenic input of nutrients near towns (Šibenik, Split), and higher annual maxima of phytoplankton abundance, red tides and the appearance of toxic species (PUCHER-PETKOVIĆ and MARASOVIĆ 1982; VILIČIĆ 1989; MARASOVIĆ 1990; MARASOVIĆ et al. 1991, 1995b). The highly stratified estuaries are characterized by an accumulation of microphytoplankton (VILIČIĆ et al. 1989), nanophytoplankton (DENANT et al. 1991, AHEL et al. 1996), bacteria (FUKS et al. 1991), dissolved organic matter and detritic particles (ŽUTIĆ and LEGOVIĆ 1987, CAUWET 1991), and pollutants (MIKAC et al. 1989) along the sharp halocline.

There is a complex water circulation in the karstic catchment areas in the vicinity of eastern Adriatic estuaries (BONACCI 1999). The numerous permanent and temporary underwater springs ("vruljas") in the estuaries are connected with swallow holes ("ponors") in the hinterland. Underwater springs discharge water during rainy (October-December) and snow melting periods (March-May).

Southern Adriatic

The surface circulation over the South Adriatic Pit consists of a topographically–controlled cyclonic gyre which appears partially to separate the Middle Adriatic from the Mediterranean influence. It is not known to what extent this feature is driven by the surface and intermediate Ionian water inflow or how important the seasonal wind field is (ORLIĆ et al. 1992). Also, the fresh water coming from the east coast rivers appears to influence the circulation. In the oligotrophic offshore southern (as well as middle) Adriatic, the phytoplankton biomass is much lower than in the northern Adriatic, with maxima appearing only in spring (VILIČIĆ et al. 1989). The southern Adriatic coastal environments are not influenced by any considerable anthropogenic influence (VILIČIĆ et al.1995a, 1998).

Materials and methods

Phytoplankton was collected by samplers and nets at standard stations in the Northern Adriatic (mainly along the Rovinj–Po profile, and the Istrian peninsula), the Middle Adriatic (along the coast, and the Split–Vis–Mt. Gargano profile), and the southern Adriatic (mostly in Mali Ston Bay, and along the NW edge of the Southern Adriatic Pit).

Samples were preserved in a 2 per cent (final concentration) neutralized formaldehyde solution. Samples from the northern Adriatic were preserved in alkaline lugol solution. The taxonomic list was prepared mainly according to cell counts obtained by the inverted microscope method (UTERMÖHL 1958). Enumerations were carried out using Zeiss and Olympus microscopes; phase contrast and bright–field illumination, magnification 400 and 200 × . In the southern Adriatic and along the middle Adriatic bays, the checklist also contains taxa determined in plankton nets (53 μm pore size), providing data on rare species (less abundant than 10^2 cells L^{-1}). Recognizable nanoplankton cells were counted at a magnification of 400 × .

Species identification was performed with the aid of standard monographs, such as: SCHILLER (1933), HUSTEDT (1959), TAYLOR (1976), DODGE (1982), PERAGALLO and PERAGALLO (1984), SOURNIA (1986), RICARD (1987), BALECH (1988) CHRÉTIENNOT-DINET et al. (1990), ROUND et al. (1992), HEIMDAL (1993), KLEIJNE (1991, 1992), SOURNIA et al. (1991), THRONDSEN (1993), JORDAN and GREEN (1994), HASLE and SYVERTSEN (1996), STEIDINGER and TANGEN (1996), HERNÁNDEZ-BECERRIL and BRAVO–SIERRA (2001). The species names were revised according to HENDEY (1974), TRAVERS (1975), MARINO and MODIGH (1981), DODGE (1982), NORRIS (1984), DODGE and SAUNDERS (1985), ROUND et al. (1992), KNAPPERTSBUSCH (1993), THRONDSEN (1993), JORDAN and GREEN (1994), HERNÁNDEZ-BECERRIL (1995), STEIDINGER and TANGEN (1996).

The checklist is completed with some heterotrophic species such as those from genera of *Protoperidinium* and *Hermesinum*, which are usually analyzed by phytoplanktologists.

Results and discussion

Hydrography and plankton

The north-westerly inflowing current in the eastern Adriatic result in high salinity, reaching values of 38.65 in most coastal environments (Fig. 2). Thermic stratification might be detected in summer, providing temperatures of 22–26 °C above the thermocline

(Fig. 3). Inverted stratification might be detected in winter (in the period from December–March), with surface temperatures of about 10 °C. A short appearance of surface ice might be sporadically detected in the area of the Zrmanja River estuary. Isothermic conditions might be determined in March-April and October–November.

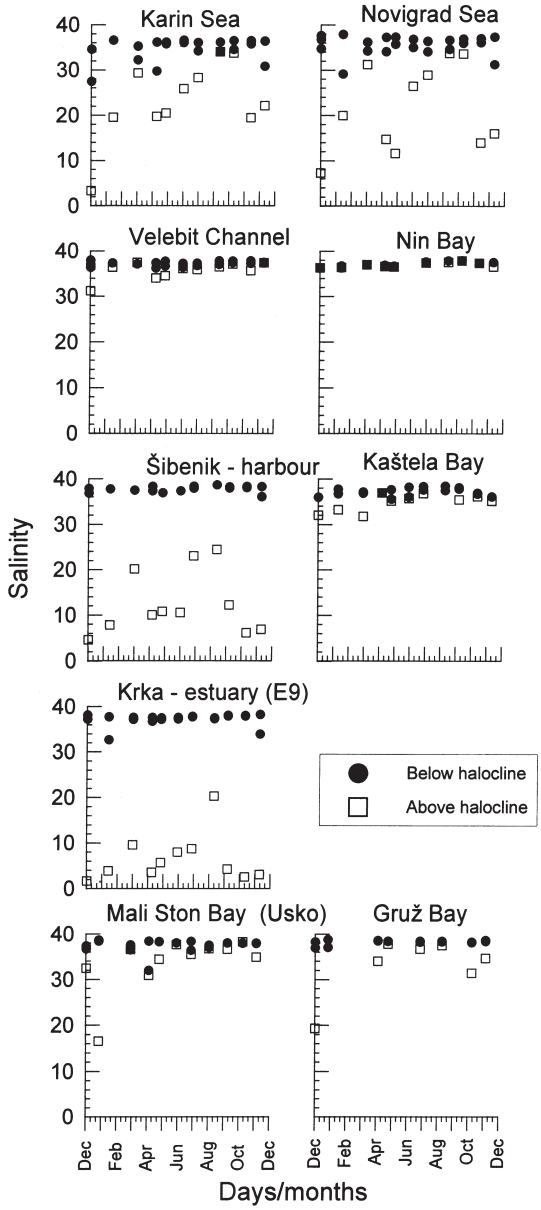

Fig. 2. Seasonal distribution of salinity at some eastern, coastal Adriatic Sea stations, such as the Zrmanja Estuary (Karin, Novigrad), Krka Estuary (Šibenik, Prokljan-E9), and bays (Nin, Kaštela, Mali Ston, Gruž), during 1981/1982.

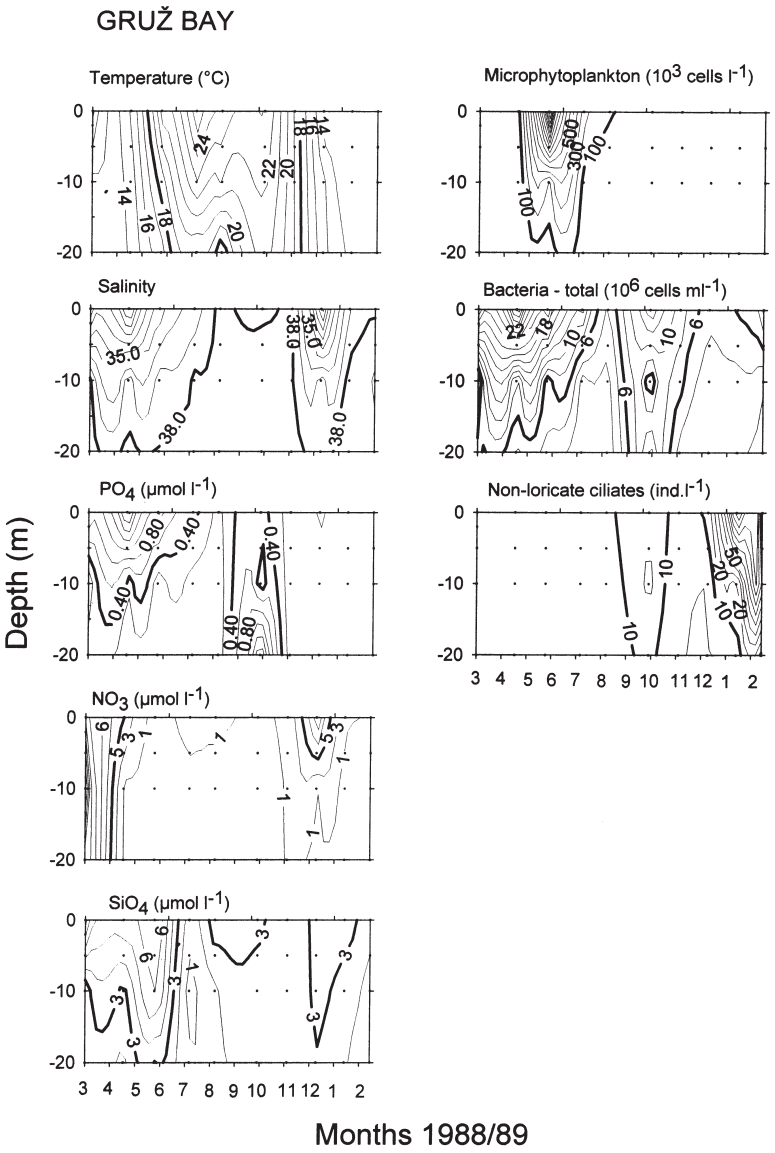

Fig. 3. Successive development of microphytoplankton, bacteria and ciliates indirectly indicate an exchange between productive and regenerative phases in the eastern coastal Adriatic environment (Gruž Bay). Modified according to already published data (VILIČIĆ et al. 1995a).

The published hydrographic data along the eastern coastal Adriatic have provided evidence of relatively low concentrations of orthophosphates and nitrates (LEGOVIĆ et al. 1994, VILIČIĆ et al. 1999, 2001), a well oxygenated and transparent water column, as well as relatively stabile phytoplankton abundances along the most part of the eastern Adriatic coast, i.e. moderate eutrophication (VILIČIĆ 1989). Phosphates are most frequently the limiting growth factor for phytoplankton growth (LEGOVIĆ et al. 1994, VILIČIĆ et al. 2001).

Secchi disc transparency varied between 2 and 32 m; i.e. 2–22 m in the coastal area, and 10–32 m in the offshore southern Adriatic (VILIČIĆ 1993, MARASOVIĆ et al. 1995a).

Taxonomic composition

Marine diatoms provided the dominant phytoplankton group. More pennatae diatoms are determined in the northern Adriatic, while centric diatoms characterized the offshore southern Adriatic. Occasional dense populations of dinoflagellates, coccolithophorids and cryptophytes might have also occurred in coastal environments and the shallower northern Adriatic. Increased abundance of phytoplankton, especially diatoms (reaching values higher than 5×10^6 cells L^{-1}), was more frequently detected in areas of anthropogenic influence (i.e. in Šibenik harbour), and in the northwestern Adriatic surface layers. Among larger prymnesiophytes, abundant populations of *Syracosphaera* were registered in summer–autumn. Abundant populations of small prymnesiophytes such as *Emiliania huxleyi* were observed in the northern Adriatic.

In the eastern Adriatic, diatoms were composed of 518 species (330 pennates, 174 centric diatoms), dinoflagellates 264, prymnesiophytes 101, chrysophyceae 2, raphidophytes 1 and euglenophytes 2 species (Tabs. 1, 2, 3). The old published data were supplemented with more recent information from the period 1981–2000.

A comparative study of Adriatic phytoplankton with that of adjacent regions reveals that diatoms appear in greatest abundances, and provide aspecies diversity similar to that of dinoflagellates. The particular regions of the Mediterranean are characterized by the same dominant species. Forty two % of the Western Mediterranean phytoplankton species permanently inhabit the Eastern Basin (TRAVERS 1975). Diatoms have been mostly investigated and thus compareble throughout the Mediterranean. The number of diatoms determined in different parts of the Mediterranean mostly varies between 107 to 183 (TOLOMIO 1978, 1982; CAROPPO 1999; LAKKIS and NOVEL-LAKIS 1980; MARINO and MODIGH 1981). The greatest number of diatoms (400) is listed in the northern Mediterranean (400 listed by Travers and Travers 1973) and 518 in the eastern Adriatic (this paper). In shallow environments, the number of benthic diatoms is increased (TRAVERS and TRAVERS 1975, ECONOMOU-AMILLI 1980), somewhere up to 64% (this paper) or 70% of total number of diatoms (TOLOMIO 1978).

The taxonomic composition of diatoms in the eastern Adriatic may be defined as the community *Chaetoceros–Rhizosolenia (Proboscia),* which is characteristic of the eastern basin (KIMOR 1983, KIMOR et al. 1987, VILIČIĆ et al. 1995b). This community is characterized by genera such as: *Chaetoceros, Pseudo–nitzschia, Proboscia, Rhizosolenia, Bacteriastrum, Cerataulina, Leptocylindrus, Thalassionema*.

The number of determined dinoflagellates in the Mediterranean varies between 107 and 250 (LAKIS and NOVEL-LAKIS 1980, CAROPPO 1999, TRAVERS and TRAVERS 1973). The checklist in the eastern Adriatic provide information on dinoflagellates as the most diverse group in the Mediterranean. Species diversity of coccolithophorides throughout the Mediterranean is not comparable due to different methodologies of determination.

The relatively large number of phytoplankton taxa determined along the eastern Adriatic Sea is probably due to differences in ecological conditions between the northern and southern Adriatic, and the number of analysts who have successfully determined various groups of phytoplankton during last decades.

The checklist of phytoplankton in the Adriatic Sea presented indicates that total number of species has not been definitively determined, especially in the nanoplankton size fraction. The forthcoming research throughout the Mediterranean would be focused on the taxonomy of small sized phytoplankton.

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Tab 1. List of cryptophytes, raphidophytes, and chrysophytes (chrysophyceae, prymnesiophyceae), with common synonyms – determined in the northern (N), middle (M) and southern (S) Adriatic Sea. * Registered by REVELANTE (1985), subsequently not found.

	N	M	S
CRYPTOPHYTA			
Cryptomonas schaudinii Winther	+*		
Hillea fusiformis Schiller	+*		
RAPHIDOPHYTA			
Olisthodiscus luteus N. Carter		+	
CHRYSOPHYTA			
Chrysophyceae			
Dictyocha fibula Ehrenberg	+	+	+
Dictyocha speculum Ehrenberg [syn: *Distephanus speculum* Ehrenberg)]	+	+	+
Meringosphaera mediterranea Lohmann	+*		
Prymnesiophyceae			
Acanthoica acanthos (Schiller) Deflandre	+		
Acanthoica monospina Schiller	+		
Acanthoica quattrospina Lohmann	+	+	+
Acanthoica rubus Kamptner	+*		
Algirosphaera quadricorni (Schiller) Norris [*Syracosphaera quadricornu* Schiller]	+	+	+
Algirosphaera robusta (Lohmann) Norris [syn: *Anthosphaera robusta* (Lohmann) Kamptner, *Syracosphaera robusta* (Lohmann)]	+*		
Alisphaera ordinata (Kamptner) Heimdal [syn: *Acanthoica ordinata* Kamptner)]	+*		
Anoplosolenia brasiliensis (Lohmann) Deflandre [syn: *Calciosolenia granii* Schiller)]	+		+
Anthosphaera fragaria Kamptner [syn: *Helladosphaera fragaria* Kamptner]	+*		
Calcidiscus leptoporus (Murray et Blachman) Loeblich Jr. et Tappan [syn: *Coccolithus leptoporus* (Murray at Blackman) Lohmann	+*		
Calciopappus caudatus Gaarder et Ramsfjell		+	+
Calciopappus rigidus Heimdal	+	+	
Calciosolenia murrayi Gran [syn: *C. sinuosa* Schlauder]			

Tab. 1. – continued

	N	M	S
Calyptrolithina wettsteinii (Kamptner) Kleijne [syn: *Corisphaera wettsteinii (*Kamptner) Gaarder, *Zygosphaera wettsteinii* Kamptner]	+*		
Calyptrosphaera dalmatica Schiller	+*		
Calyptrosphaera globosa Lohmann	+*	+	
Calyptrosphaera incisa Schiller	+*		
Calyptrosphaera oblonga Lohmann	+	+	+
Calyptrosphaera pirus Kamptner	+*		
Calyptrosphaera pyriformis Schiller	+*		
Calyptrosphaera quadridentata Schiller [syn: *Sphaerocalyptra quadridentata* (Schiller) Deflandre)]	+*		
Calyptrosphaera sphaeroidea Schiller	+*		
Calyptrosphaera uvella Schiller	+*		
Coccolithus pelagicus (Wallich) Lohmann	+*		
Coccolithus wallichii (Lohmann) Schiller	+*		
Corisphaera arethusae Kamptner	+*		
Corisphaera corona Kamptner	+*		
Corisphaera gracillis Kamptner	+*		
Corisphaera spinosa Kamptner	+*		
Coronosphaera binodata (Kamptner) Gaarder [syn: *Syracosphaera binodata (*Kamptner) Kamptner]	+*		
Coronosphaera mediterranea [syn: *Syracosphaera tuberculata* Kamptner]	+*		
Cyrtosphaera aculeata (Kamptner) Kleijne [syn: *Acanthoica aculeata* Kamptner)]	+*		
Discosphaera thomsonii Ostenfeld			+
Discosphaera tubifera (Murray et Blackman) Ostenfeld			+
Emiliania huxleyi (Lohmann) Hay et Mohler [syn: *Coccolithus huxleyi* (Lohmann) Kamptner , *Pontosphaera huxleyi* Lohmann]	+	+	+
Helicosphaera carteri (Wallich) Kamptner [syn: *Coccolithus carteri* (Wallich) Kamptner]	+*		
Helladosphaera cornifera (Schiller) Kamptner [syn: *Syracosphaera cornifera* Schiller]	+*		
Homozygosphaera ponticulifera (Kamptner) Kamptner [syn: *Corisphaera ponticulifera* Kamptner]	+*		
Homozygosphaera tholifera (Kamptner) Halldal et Markali [syn: *Calyptrosphaera tholifera* Kamptner]	+*		
Lohmannosphaera adriatica Schiller	+*		
Lohmannosphaera paucoscyphos Schiller	+*		
Michaelsarsia adriatica (Schiller emend. Manton, Bremer et Bates [syn: *Halopappus adriaticus* Schiller]		+	+
Michaelsarsia falklandica Lohmann	+*		
Najadea gloriosa Schiller	+*		
Ophiaster formosus Gran	+		+
Ophiaster hydroideus (Lohmann) Lohmann			+

Tab. 1. – continued

	N	M	S
Periphyllophora mirabilis (Schiller) Kamptner [syn: *Calyptrosphaera mirabilis* Schiller]	+*		
Pontosphaera discopora Schiller	+*		
Pontosphaera echinophora Schiller	+*		
Pontosphaera haeckelii Lohmann	+*		
Pontosphaera hartmannii Schiller	+*		
Pontosphaera inermis Lohmann	+*	+	
Pontosphaera nana Kamptner	+*		
Pontosphaera nigra Schiller [2]	+*		
Pontosphaera ovalis Schiller	+*	+	
Pontosphaera pietschmannii Kamptner	+*		
Pontosphaera steueri Kamptner	+*		
Poricalyptra aurisinae (Kamptner) Kleijne [syn: *Helladosphaera aurisinae* Kamptner]	+*		
Rhabdosphaera clavigera Murray et Blackman [syn: *Rhabdosphaera stylifera* Lohmann]	+	+	+
Rhabdosphaera erinacea Kamptner	+*		
Rhabdosphaera longistylis Schiller[1]	+*	+	
Rhabdosphaera nigra Schiller[2]	+*		
Rhabdosphaera tignifer Schiller	+	+	+
Rhabdosphaera tubulosa Schiller	+*		
Rhabdothorax hispidus (Lohmann) Kamptner [syn: *Rhabdosphaera hispida*]	+	+	+
Scyphosphaera apsteinii Lohmann		+	+
Syracolithus catilliferus (Kamptner) Deflandre [syn: *Calyptrosphaera catillifera* (Kamptner) Gaarder, *Syracosphaera catilifera* Kamptner]	+*		
Syracolithus catilliferus (Kamptner) Deflandre [syn: *Sphaerocalyptra gracillima* (Kamptner) Throndsen, *Calyptrosphaera gracillima* (Kamptner) Gaarder]	+*		
Syracolithus dalmaticus (Kamptner) Loeblich et Tappan [syn: *Calyptrosphaera insignis* Schiller, *Syracosphaera dalmatica* Kamptner]	+*		
Syracolithus quadriperforatus (Kamptner) Gaarder [syn: *Homozygosphaera quadriperforata* (Kamptner) Gaarder, *Syracosphaera quadriperforata*]	+*		
Syracolithus schilleri (Kamptner) Kamptner [syn: *Homozygosphaera schilleri* (Kamptner) Okada et McIntyre, *Syracosphaera schilleri* Kamptner]	+*		
Syracosphaera adriatica Schiller	+*	+	
Syracosphaera anthos (Lohmann) Zanin [syn: *Deutschlandia anthos* Lohmann]	+*		
Syracosphaera bifenestrata Schiller	+*		
Syracosphaera cordiformis Schiller		+	
Syracosphaera cornifera Schiller	+*		

Tab. 1. – continued

	N	M	S
Syracosphaera cornus Kamptner	+*		
Syracosphaera coronata Schiller	+*		
Syracosphaera cupulifera Schiller	+*		
Syracosphaera dentata Lohmann	+*		
Syracosphaera grundii Schiller	+*		
Syracosphaera halldalii Gaarder ex Jordan et Green [syn: *Caneosphaera halldalii* (Gaarder) Gaarder, *Syracosphaera mediterranea*]	+	+	
Syracosphaera histrica Kamptner [syn: *Syracosphaera nodosa* Kamptner in Okada et Hanjo 1970]	+*		
Syracosphaera lohmannii Brunnthaler	+*		
Syracosphaera molischii Schiller [syn: *Caneosphaera molischii* (Schiller) Gaarder]	+	+	
Syracosphaera ovata Schiller	+	+	
Syracosphaera pulchra Lohmann	+	+	+
Syracosphaera radiata Schiller	+*		
Syracosphaera spinosa Lohmann	+*		
Syracosphaera tenuis Lohmann	+*		
Tergestiella adriatica Kamptner	+*		
Thalassopappus pellucidus Kamptner	+*		
Thorosphaera elegans Ostenfeld			+
Zygosphaera debilis Kamptner	+*		
Zygosphaera hellenica Kamptner	+*		

[1] *Rhabdosphaera longistylis* is possibly a non-coccolithophorid (NORRIS 1984). If further research reveals a coccolithophorid nature, it may need to be transferred to another genus.
[2] KAMPTNER (1941) suggested that *Ponthosphaera nigra* is a synonym of *Rhabdosphaera nigra*.

Tab. 2. List of diatoms (with common synonyms) – determined in the northern (N), middle (M) and southern (S) Adriatic Sea. * Registered by REVELANTE (1985). C – centric, P – pennate diatoms

		N	M	S
	Bacillariophyceae			
P	*Achnanthes brevipes* Agardh	+		+
P	*Achnanthes danica* (Floegel) Grunow	+*		
P	*Achnanthes dispar* Cleve	+*		
P	*Achnanthes longipes* Agardh	+	+	+
P	*Achnanthes lorenziana* (Grunow) Cleve	+*		
P	*Achnanthes stroemii* Hustedt	+*		
C	*Actinocyclus alienus* Grunow	+*		
C	Actinocyclus octonarius Ehrenberg [syn. A. ehrenbergii Ralfs]	+	+	+
C	*Actinocyclus subtilis* (Gregory) Ralfs	+*		
C	*Actinoptychus adriaticus* Grunow	+*	+	
C	*Actinoptychus senarius* (Ehrenberg) Ehrenberg	+*		

Tab. 2. – continued

		N	M	S
C	*Actinoptychus splendens* (Shadbolt) Ralfs	+*	+	
P	*Amphipleura micans* (Lyngbye) Cleve	+*		
P	*Amphiprora decussata* (Grunow) Cleve			+
P	*Amphiprora gigantea* Grunow	+		
P	*Amphiprora sulcata* O'Meara	+		+
P	*Amphora acuta* Gregory	+*		
P	*Amphora acutiuscula* Kützing	+*		
P	*Amphora angusta* Gregory	+*		
P	*Amphora arcus* Gregory	+*		
P	*Amphora arenaria* Donkin	+*		+
P	*Amphora binodis* Gregory	+*		
P	*Amphora cingulata* Cleve	+*		
P	*Amphora coffeaeformis* (Agardh) Kützing	+*		
P	*Amphora costata* W. Smith	+*		
P	*Amphora crassa* Gregory	+*		
P	*Amphora decussata* Grunow	+*		
P	*Amphora dubia* (Gregory) A. Schmidt	+*		
P	*Amphora graeffii* (Grunow) Cleve	+*		
P	*Amphora granulifera* Cleve	+*		
P	*Amphora hyalina* Kützing	+*		
P	*Amphora inflexa* Brébisson	+		
P	*Amphora janischii* A. Schmidt	+*		
P	*Amphora laevis* Gregory	+*		
P	*Amphora laevissima* Gregory	+*		
P	*Amphora lineolata* Ehrenberg	+*		
P	*Amphora marina* (W. Smith) Van Heurck	+*		
P	*Amphora mexicana* A. Schmidt	+*		
P	*Amphora obtusa* Gregory	+*		
P	*Amphora ostrearia* Brébisson	+		+
P	*Amphora ovalis* Kützing	+*		
P	*Amphora proteus* Gregory	+*		
P	*Amphora pusio* Cleve	+*		
P	*Amphora rhombica* Kitton	+*		
P	*Amphora robusta* Gregory	+*		
P	*Amphora securicula* Peragallo et Peragallo	+*		
P	*Amphora staurophora* (Castracane) Cleve	+*		
P	*Amphora sulcata* (Brébisson) Cleve	+*		
P	*Amphora terroris* Ehrenberg	+*		
P	*Amphora veneta* Kützing	+*		
P	*Amphora weissflogii* A. Schmidt	+*		
P	*Asterionella bleakeleyii* W. Smith			+
P	*Asterionellopsis glacialis* (Castracane) Round [syn. *Asterionella glacialis* Castracane]	+	+	+
C	*Asterolampra grevillei* (Wallich) Greville			+
C	*Asterolampra marylandica* Ehrenberg [syn. *Asterolampra vanheurckii* Brun]		+	
C	*Asteromphalus flabellatus* (Brébisson) Greville	+		+

Tab. 2. – continued

		N	M	S
C	*Asteromphalus heptactis* (Brébisson) Ralfs	+	+	+
C	*Asteromphalus robustus* Castracane	+	+	
C	*Auliscus sculptus* (W. Smith) Ralfs	+*		
P	*Auricula adriatica* Peragallo	+		+
P	*Auricula amphitritis* Castracane	+*		
P	*Auricula complexa* (Gregory) Cleve	+*		
P	*Auricula decipiens* Grunow	+*		
P	*Auricula insecta* (Grunow) Cleve	+	+	+
C	*Azpeitia nodulifera* (A. Schmidt) Fryxell et P.A. Sims [syn. *Coscinodiscus nodulifer* A. Schmidt]	+	+	
C	*Azpeitia obscurum* (Greville) Sims in Williams	+		
C	*Azpeitia tabularis* (Grunow) Fryxell et P.A. Sims	+		
P	*Bacillaria paxillifera* (Müller) Hendey [syn. *B. paradoxa* Gmelin]	+	+	+
C	*Bacteriastrum biconicum* Pavillard		+	+
C	*Bacteriastrum delicatulum* Cleve		++	+
C	*Bacteriastrum elegans* Pavillard			+
C	*Bacteriastrum elongatum* Cleve	+	+	+
C	*Bacteriastrum furcatum* Shadbolt [syn. *Bacteriastrum varians* Lauder]	+		
C	*Bacteriastrum hyalinum* Lauder	+	+	+
C	*Bacteriastrum mediterraneum* Pavillard		+	+
C	*Bacterosira bathyomphala* (Cleve) Syvertsen et Hasle [syn. *Coscinodiscus bathyomphalus* Cleve]	+*		
C	*Biddulphia biddulphiana* (Smith) Boyer [syn. *B. pulchella* Gray]	+	+	+
C	*Biddulphia catenata* Schussnig	+	+	
C	*Biddulphia pelagica* Schroeder	+*		
C	*Biddulphia pellucida* Castracane	+*	+	
C	*Biddulphia rhombus* (Ehrenberg) W. Smith	+*		
C	*Biddulphia titiana* Grunow von Stoch et Simons	+		+
C	*Biddulphia tridens* (Ehrenberg) Ehrenberg	+*		
C	*Biddulphia tuomeyii* (Bailey) Roper	+*		
P	*Bleakeleya notata* (Grun.) Round [syn. *Asterionella bleakeleyi* var. *notata* Grunow]			+
P	*Caloneis bioculata* (Grunow) Hustedt	+*		
P	*Caloneis egena (*A. Schmidt) Cleve	+*		
P	*Caloneis fusoides* (Grunow) Heiden et Kolbe	+*		
P	*Caloneis latefasciata* Grunow	+*		
P	*Caloneis liber* (W. Smith) Cleve	+*		
P	*Caloneis linearis* (Grunow) Boyer [syn. *C. liber* var. *linearis* (Grunow)]	+*		
C	*Campylodiscus adriaticus* Grunow	+*		
C	*Campylodiscus biangulatus* Greville	+*		
C	*Campylodiscus clevei* Peragallo	+*		
C	*Campylodiscus decorus* Brébisson	+		+
C	*Campylodiscus echeneis* Ehrenberg	+*		
C	*Campylodiscus hodgsonii* W. Smith	+*		
C	*Campylodiscus imperialis* Greville	+*		

Tab. 2. – continued

		N	M	S
C	*Campylodiscus impressus* Grunow	+*		
C	*Campylodiscus limbatus* Brébisson	+*		
C	*Campylodiscus parvulus* W. Smith	+*		
C	*Campylodiscus samoensis* Grunow	+*		
C	*Campylodiscus thureti* Brébisson	+	+	+
C	*Cerataulina pelagica* (Cleve) Hendey	+	+	+
C	*Cerataulus smithii* Ralfs	+		+
C	*Chaetoceros affinis* Lauder	+	+	+
C	*Chaetoceros anastomosans* Grunow	+	+	+
C	*Chaetoceros atlanticus* Cleve	+	+	+
C	*Chaetoceros borealis* Bailey	+*		
C	*Chaetoceros brevis* Schütt	+	+	+
C	*Chaetoceros coarctatus* Lauder			+
C	*Chaetoceros compressus* Lauder	+	+	+
C	*Chaetoceros concavicornis* Mangin	+		
C	*Chaetoceros convolutus* Castracane			+
C	*Chaetoceros costatus* Pavillard			+
C	*Chaetoceros criophilus* Castracane	+*		
C	*Chaetoceros curvisetus* Cleve	+	+	+
C	*Chaetoceros dadayi* Pavillard	+	+	+
C	*Chaetoceros danicus* Cleve	+		+
C	*Chaetoceros debilis* Cleve	+		
C	*Chaetoceros decipiens* Cleve	+	+	+
C	*Chaetoceros delicatulus* Ostenfeld	+		+
C	*Chaetoceros densus* (Cleve) Cleve	+	+	+
C	*Chaetoceros diadema* (Ehrenberg) Gran [syn. *Ch. subsecundus* (Grunow) Hustedt]	+	+	
C	*Chaetoceros didymus* Ehrenberg	+	+	+
C	*Chaetoceros diversus* Cleve	+	+	+
C	*Chaetoceros fragilis* Meunier	+		
C	*Chaetoceros furcellatus* Bailey	+		
C	*Chaetoceros gracilis* Schütt	+		
C	*Chaetoceros holsaticus* Schütt	+		
C	*Chaetoceros insignis* Proškina–Lavrenko	+		
C	*Chaetoceros laciniosus* Schütt	+	+	
C	*Chaetoceros lauderi* Ralfs	+		+
C	*Chaetoceros lorenzianus* Grunow	+	+	+
C	*Chaetoceros messanensis* Castracane	+	+	+
C	*Chaetoceros paulsenii* Ostenfeld	+		
C	*Chaetoceros pelagicus* Cleve	+*		
C	*Chaetoceros perpusillus* Cleve	+		+
C	*Chaetoceros peruvianus* Brightwell	+	+	+
C	*Chaetoceros pseudocurvisetus* Mangin	+	+	
C	*Chaetoceros radicans* Schütt	+		
C	*Chaetoceros rigidus* Ostenfeld	+		
C	*Chaetoceros rostratus* Lauder	+	+	+

Tab. 2. – continued

		N	M	S
C	*Chaetoceros similis* Cleve	+		
C	*Chaetoceros simplex* Ostenfeld	+		+
C	*Chaetoceros socialis* Lauder	+	+	+
C	*Chaetoceros subtilis* Cleve	+		
C	*Chaetoceros tenuissimus* Meunier	+	+	
C	*Chaetoceros teres* Cleve	+		
C	*Chaetoceros tetrastichon* Cleve	+	+	+
C	*Chaetoceros throndsenii* (Marino, Montresor, Zingone)	+	+	
C	*Chaetoceros tortissimus* Gran	+	+	+
C	*Chaetoceros vixvisibilis* Schiller	+	+	+
C	*Chaetoceros wighamii* Brightwell	+	+	+
P	*Climacosphaenia moniligera* Ehrenberg	+*		
P	*Cocconeis britannica* Naegeli	+*		
P	*Cocconeis californica* Grunow	+*		
P	*Cocconeis distans* Gregory	+*		
P	*Cocconeis fimbriata* Ehrenberg	+*		
P	*Cocconeis fluminensis* (Grunow) Peragallo	+*		
P	*Cocconeis maxima* (Grunow) Peragallo	+*	+	
P	*Cocconeis molesta* Kützing	+*		
P	*Cocconeis nummularia* (Greville) Peragallo	+*		
P	*Cocconeis pinnata* Gregory	+*		
P	*Cocconeis pseudomarginata* Gregory	+*		
P	*Cocconeis quarnerensis* (Grunow) A. Schmidt	+*		
P	*Cocconeis scutellum* Ehrenberg	+	+	+
C	*Corethron hystrix* Cleve	+	+	+
C	*Coscinodiscus asteromphalus* Ehrenberg	+*		
C	*Coscinodiscus centralis* Ehrenberg	+	+	+
C	*Coscinodiscus cinctus* Kützing	+*		
C	*Coscinodiscus curvatulus* Grunow			+
C	*Coscinodiscus fimbriatus* Ehrenberg	+*		
C	*Coscinodiscus gigas* Ehrenberg			+
C	*Coscinodiscus granii* Gough			+
C	*Coscinodiscus granulosus* Grunow	+	+	
C	*Coscinodiscus hauckii* Grunow	+	+	
C	*Coscinodiscus janischii* Schmidt			+
C	*Coscinodiscus marginatus* Ehrenberg	+	+	
C	*Coscinodiscus nitidus* Gregory	+	+	
C	*Coscinodiscus obscurus* A. Schmidt	+		
C	*Coscinodiscus oculus iridis* Ehrenberg	+	+	
C	*Coscinodiscus perforatus* Ehrenberg	+		+
C	*Coscinodiscus radiatus* Ehrenberg	+	+	
C	*Coscinodiscus thorii* Pavillard			+
C	*Cyclotella kützingiana* var. *pelagica* Grunow	+*		+
C	*Cyclotella striata* (Kützing) Grunow	+*	+	+
P	*Cylindrotheca closterium* (Ehrenberg) Reimann et Lewin [syn. *Nitzschia closterium* (Ehrenberg) W. Smith)]	+	+	+
C	*Cymatosira belgica* Grunow	+*		

Tab. 2. – continued

		N	M	S
C	*Dactyliosolen blavyanus* (Peragallo) Hasle [syn. *Guinardia blavyana* Peragallo]	+	+	+
C	*Dactyliosolen fragilissimus* (Bergon) Hasle [syn. *Rhizosolenia fragilissima* Berghon]	+	+	+
C	*Detonula confervacea* (Cleve) Gran	+		
C	*Detonula pumila* (Castracane) Gran		+	+
P	*Diatoma elongatum* (Lyngbey) Agardh		+	
P	*Dimerogramma dubium* Grunow	+*		
P	*Dimerogramma fulvum* (Gregory) Ralfs	+*		
P	*Dimerogramma furcigerum* Grunow	+*		
P	*Dimerogramma marinum* (Gregory) Ralfs	+*		
P	*Dimerogramma minor* (Gregory) Ralfs	+*		
P	*Diploneis adonis* (Brun) Cleve	+*		
P	*Diploneis advena* (A. Schmidt) Cleve	+*		
P	*Diploneis bombus* Ehrenberg	+	+	+
P	*Diploneis campylodiscus* (Grunow) Cleve	+*		
P	*Diploneis crabro* Ehrenberg	+		+
P	*Diploneis dalmatica* (Grunow) Cleve	+*		
P	*Diploneis didyma* (Ehrenberg) Cleve	+*		
P	*Diploneis distortum* W. Smith	+		
P	*Diploneis divergens* (A. Schmidt) Cleve	+*		
P	*Diploneis fusca* (Gregory) Cleve	+*		
P	*Diploneis mediterranea* (Grunow) Cleve	+*		
P	*Diploneis notabilis* (Greville) Cleve	+*		
P	*Diploneis papula* (A. Schmidt) Cleve	+*		
P	*Diploneis smithii* (Brébisson) Cleve	+		+
P	*Diploneis splendida* (Gregory) Cleve	+*		
P	*Diploneis subcincta* (A. Schmidt) Cleve	+*		
P	*Diploneis suborbicularis* (Gregory) Cleve	+*		
P	*Diploneis vacillans* (A. Schmidt) Cleve	+*		
C	*Ditylum brightwellii* (West) Grunow	+	+	+
P	*Donkinia recta* (Donkin) Grunow			+
P	*Endictya oceanica* Ehrenberg	+*		
P	*Entomoneis alata* (Ehrenberg) Ehrenberg [syn. *Amphiprora alata* (Ehrenberg) Kützing]			+
P	*Entomoneis paludosa* (W. Smith) Reimer [syn. *Amphiprora paludosa* W. Smith]	+		
P	*Entomoneis pulchra* (Bailey) Reimer [syn. *Amphiprora pulchra* Bailey]			+
C	*Eucampia cornuta* (Cleve) Grunow	+	+	+
C	*Eucampia zodiacus* Ehrenberg	+		+
P	*Glyphodesmis distans* (Gregory) Grunow	+*		
P	*Glyphodesmis williamsonii* (W. Smith) Grunow	+*		
C	*Gossleriella tropica* Schütt			+
P	*Grammatophora angulosa* Ehrenberg	+*		
P	*Grammatophora gibberula* Kützing	+*		
P	*Grammatophora hamulifera* Kützing	+*		

Tab. 2. – continued

		N	M	S
P	*Grammatophora longissima* Petit	+*		
P	*Grammatophora macilenta* W. Smith	+*		
P	*Grammatophora marina* (Lyngbey) Kützing	+		
P	*Grammatophora oceanica* Ehrenberg	+	+	
P	*Grammatophora serpentina* (Ralfs) Ehrenberg	+*		
P	*Grammatophora undulata* Ehrenberg	+		
P	*Grunowiella perminuta* (Grunow) Peragallo	+*		
C	*Guinardia delicatula* (Cleve) Hasle [syn. *Rhizosolenia delicatula* Cleve]	+		
C	*Guinardia flaccida* (Castracane) Peragallo	+	+	+
C	*Guinardia striata* (Stolterfoth) Hasle [syn. *Rhizosolenia stolterfothii* Peragallo]	+	+	+
P	*Hantzschia marina* (Donkin) Grunow	+*		
C	*Hemiaulus hauckii* Grunow	+	+	+
C	*Hemiaulus sinensis* Greville	+	+	+
C	*Hemidiscus cuneiformis* Wallich	+*		
C	*Huttonia reichardtii* Grunow	+*		
C	*Hyalodiscus scoticus* (Kützing) Grunow	+*		
C	*Hyalodiscus subtilis* Bailey	+*		
P	*Isthmia enervis* Ehrenberg		+	
C	*Lampriscus kittonii* Schmidt [syn. *Triceratium shadboltianum* Greville]			+
C	*Lauderia annulata* Cleve [syn. *L. borealis* Gran]	+		+
C	*Leptocylindrus danicus* Cleve	+	+	+
C	*Leptocylindrus mediterraneus* (Peragallo) Hasle [syn. *Dactyliosolen mediterraneus* Peragallo]	+	+	+
C	*Leptocylindrus minimus* Gran	+	+	+
P	*Licmophora communis* (Heiberg) Grunow	+*		
P	*Licmophora dalmatica* (Kützing) Grunow	+*		
P	*Licmophora debilis* (Kützing) Grunow	+*		
P	*Licmophora ehrenbergii* (Kützing) Grunow	+		+
P	*Licmophora flabellata* (Carmichael) Agardh	+	+	+
P	*Licmophora gigantea* Mereschkowsky	+*		
P	*Licmophora gracilis* (Ehrenberg) Grunow	+		+
P	*Licmophora grandis* (Kützing) Grunow	+*		
P	*Licmophora hastata* Mereschowsky	+*		
P	*Licmophora hyalina* (Kützing) Grunow	+*		
P	*Licmophora juergensii* Agardh	+*		
P	*Licmophora lyngbyei* (Kutz.) Grunow [syn. *L. abbreviata* (Agardh) Cleve]	+		+
P	*Licmophora mediterranea* Mereschkowsky	+*		
P	*Licmophora paradoxa* (Lyngbey) Agardh	+	+	+
P	*Licmophora parasitica* Mereschowsky	+*		
P	*Licmophora reichardtii* Grunow	+		+
P	*Licmophora remulus* Grunow	+*		
P	*Licmophora robusta* Peragallo	+		+
P	*Licmophora tenuis* (Kützing) Grunow	+*		

Tab. 2. – continued

		N	M	S
P	*Lioloma delicatulum* (Cupp) Hasle	+		
P	*Lioloma pacificum* (Cupp) Hasle [syn. *Thalassiothrix mediterranea* var. *pacifica* Cupp]	+	+	+
C	*Lithodesmium undulatum* Ehrenberg			+
P	*Lyrella lyra* (Ehrenberg) Karajeva [syn. *Navicula lyra* Ehrenberg]			+
P	*Mastogloia angulata* Lewis	+*		
P	*Mastogloia apiculata* W. Smith	+*		
P	*Mastogloia binotata* (Grunow) Cleve	+*		
P	*Mastogloia braunii* Grunow	+*		
P	*Mastogloia chersonensis* A. Schmidt	+*		
P	*Mastogloia corsicana* Grunow	+*		
P	*Mastogloia crucicula* (Grunow) Cleve	+*		
P	*Mastogloia erithraea* Grunow	+*		
P	*Mastogloia fimbriata* (Brightwell) Cleve	+*		
P	*Mastogloia jelineckii* Grunow	+*		
P	*Mastogloia lanceolata* Thwaites	+*		
P	*Mastogloia macdonaldii* Greville	+*		
P	*Mastogloia mauritiana* Brun	+*		
P	*Mastogloia ovata* Grunow	+*		
P	*Mastogloia ovulum* Hustedt	+*		
P	*Mastogloia ovum-paschale* (A. Schmidt) Mann	+*		
P	*Mastogloia paradoxa* Grunow	+*		
P	*Mastogloia peragallii* Cleve	+*		
P	*Mastogloia pumila* (Grunow) Cleve	+*		
P	*Mastogloia punctifera* Brun	+*		
P	*Mastogloia pusilla* Grunow	+*		
P	*Mastogloia quinquecostata* Grunow	+*		
P	*Mastogloia schmidtii* Heiden	+*		
P	*Mastogloia smithii* Thwaites	+*		
P	*Mastogloia splendida* (Gregory) Cleve	+*		
P	*Mastogloia subaspera* Hustedt	+*		
P	*Mastogloia undulata* Grunow	+*		
C	*Melosira dubia* Kützing	+*		
C	*Melosira juergensii* Agardh	+*		
C	*Melosira moniliforme* (Müller) Agardh	+		+
C	*Melosira nummuloides* Agardh	+	+	+
C	*Melosira westii* W. Smith.	+*		
P	*Microtabella interrupta* (Ehrenberg) Round [syn. *Striatella interrupta* (Ehrenberg) Heiberg]	+	+	+
P	*Navicula abrupta* Gregory	+*		
P	*Navicula ammophila* Grunow	+*		
P	*Navicula aproximata* Greville	+*		
P	*Navicula arenaria* Donkin	+*		
P	*Navicula avenacea* Brébisson	+*		
P	*Navicula bioculata* Grunow	+*		
P	*Navicula cancellata* Donkin	+*		+

Tab. 2. – continued

		N	M	S
P	*Navicula clavata* Gregory	+*		
P	*Navicula complanata* Grunow	+*		
P	*Navicula cuspidata* Kützing	+*		
P	*Navicula digito-radiata* (Gregory) Ralfs	+*		
P	*Navicula directa* (W. Smith) Ralfs	+*		
P	*Navicula distans* (W. Smith) Ralfs	+		+
P	*Navicula forcipata* Greville	+*		
P	*Navicula formentere* Cleve	+*		
P	*Navicula grevilleana* Hendey	+*		
P	*Navicula halophila* (Grunow) Cleve	+*		
P	*Navicula hamulifera* Cleve	+*		
P	*Navicula hauckii* Cleve	+*		
P	*Navicula hennedyii* W. Smith	+*		
P	*Navicula hyalinula* De Toni [syn. *N. hyalina* Donkin]	+*		
P	*Navicula libellus* Gregory	+*		
P	*Navicula liroides* Hendey	+*		
P	*Navicula maculosa* Donkin	+*		
P	*Navicula mediterranea* Cleve et Brun	+*		
P	*Navicula meniscus* Schumann	+*		
P	*Navicula nortumbrica* Donkin	+*		
P	*Navicula palpebralis* Brébisson	+*		
P	*Navicula pennata* A. Schmidt	+*		
P	*Navicula peregrina* (Ehrenberg) Kützing	+*		
P	*Navicula phyllepta* Kützing	+*		
P	*Navicula plicata* (Ehrenberg) Donkin	+*		
P	*Navicula pygmaea* Kützing	+*		
P	*Navicula ramosissima* (Agardh) Cleve	+*		
P	*Navicula reichardtii* Grunow	+*		
P	*Navicula rhombica* Gregory	+*		
P	*Navicula scopulorum* Brébisson	+*		
P	*Navicula spectabilis* Gregory	+*		
P	*Navicula superimposita* A. Schmidt	+*		
P	*Navicula versicolor* Grunow [syn. *N. rovignensis* Grunow]	+*		
P	*Navicula viridula* (Kützing) Ehrenberg	+*		
P	*Navicula vitrea* Cleve	+*		
P	*Navicula zostereti* Grunow	+*		
C	*Neocalyptrella robusta* (Norman) Hernández–Becerril et Meave [syn. *Rhizosolenia robusta* Norman]	+	+	+
P	*Nitzschia acuminata* (W. Smith) Grunow	+*		
P	*Nitzschia acuta* Hantzsch	+*		
P	*Nitzschia angularis* W. Smith	+*		
P	*Nitzschia bilobata* W. Smith	+*		
P	*Nitzschia constricta* (Kützing) Grunow	+*		
P	*Nitzschia debilis* (Arnott) Grunow	+*		
P	*Nitzschia distans* Gregory	+		
P	*Nitzschia fluminensis* Grunow	+*		

Tab. 2. – continued

		N	M	S
P	*Nitzschia frustulum* (Kützing) Grunow	+*		
P	*Nitzschia gazellae* Karsten	+*		
P	*Nitzschia incerta* Grunow	+		+
P	*Nitzschia incurva* Grunow	+*		
P	*Nitzschia insignis* Gregory	+		+
P	*Nitzschia longissima* (Brébisson in Kützing) Ralfs in Pritchard	+		+
P	*Nitzschia lorenziana* Grunow	+*	+	+
P	*Nitzschia macilenta* Gregory	+*		
P	*Nitzschia marginulata* Grunow	+*		
P	*Nitzschia microcephala* Grunow	+*		
P	*Nitzschia navicularis* Grunow	+*		
P	*Nitzschia obtusa* W. Smith	+*		
P	*Nitzschia plana* W. Smith	+*		
P	*Nitzschia punctata* (W. Smith) Grunow	+*		
P	*Nitzschia rigida* Grunow	+*	+	
P	*Nitzschia sicula* (Castracane) Hustedt	+		+
P	*Nitzschia sigma* (Kützing) W. Smith	+		
P	*Nitzschia tryblionella* Hantzsch	+*		
C	*Odontella aurita* (Lyngbye) Agardh [syn. *Biddulphia aurita* (Lyngbye) Brébisson et Godey]	+*		
C	*Odontella mobiliensis* (Bailey) Grunow [syn. *Biddulphia mobiliensis* (Grunow) in Van Heurck]		+	+
P	*Oestrupia kinkeriana* (Truan) Heiden	+*		
P	*Oestrupia powellii* (Lewis) Heiden	+*		
P	*Opephora marina* (Gregory) Petit	+*		
P	*Opephora pacifica* (Grunow) Petit	+*		
P	*Orthoneis fimbriata* (Brun) Grunow		+	+
C	*Paralia sulcata* (Ehrenberg) Cleve) [syn. *Melosira sulcata* (Ehrenberg) Kützing]	+	+	+
P	*Petrodictyon gemma* (Ehrenberg) Mann [syn. *Surirella gemma* (Ehrenberg) Kützing]			+
P	*Phaeodactylum tricornutum* Bohlin [syn. *Nitzschia closterium* W. Smith f. *minutissima* Allen et Nelson]	+		
P	*Pinnularia rectangulata* (Gregory) Rabenhorst	+*		
P	*Plagiogramma interruptum* (Gregory) Ralfs	+*		
P	*Plagiogramma leve* (Gregory) Ralfs	+*		
P	*Plagiogramma oulchellum* Greville	+*		
P	*Plagiogramma staurophorum* (Gregory) Heiberg	+*		
P	*Plagiotropis gibberula* Grunow in Van Heurck [syn. *Tropidoneis gibberula* Grunow]	+*		
P	*Plagiotropis lata* (Clins) Kuntze [syn. *Amphiprora lata* Greville]	+*		
P	*Plagiotropis lepidoptera* (Gregory) Kuntze [syn. *Tropidoneis lepidoptera* (Gregory) Cleve]	+		+
P	*Plagiotropis maxima* (Gregory) Kuntze [syn. *Tropidoneis maxima* (Gregory) Cleve]	+*		
P	*Plagiotropis vitrea* (W. Smith) Kuntze [syn. *Tropidoneis vitrea* W. Smith]	+*		

Tab. 2. – continued

		N	M	S
C	*Planktoniella sol* (Wallich) Schütt		+	+
P	*Pleurosigma aestuari* (Brébisson) W. Smith	+		
P	*Pleurosigma angulatum* (Quekett) W. Smith	+	+	+
P	*Pleurosigma attenuatum* (Kützing) Smith			+
P	*Pleurosigma axsul* Cleve			+
P	*Pleurosigma balticum* Smith	+		+
P	*Pleurosigma compactum* Grunow	+*		
P	*Pleurosigma diminutum* Grunow	+*		
P	*Pleurosigma elongatum* W. Smith	+		+
P	*Pleurosigma formosum* W. Smith	+		+
P	*Pleurosigma lineare* Grunow	+*		
P	*Pleurosigma longum* Peragallo	+*		
P	*Pleurosigma macrum* W. Smith			+
P	*Pleurosigma naviculaceum* Brébisson	+*		
P	*Pleurosigma nicobaricum* Grunow	+	+	
P	*Pleurosigma normanii* Ralfs	+		
P	*Pleurosigma prolongatum* Schmidt	+*		
P	*Pleurosigma rectum* Donkin	+*		
P	*Pleurosigma rigidum* W. Smith	+*		
P	*Pleurosigma scalproides* Rabenhorst	+*		
P	*Pleurosigma speciosum* W. Smith	+*		
P	*Pleurosigma strigilis* Smith	+*		
P	*Pleurosigma strigosum* W. Smith [syn. *P. angulatum var. strigosum* Van Heurck]	+*		
P	*Pleurosigma wansbeckii* Donkin	+*		
P	*Podocystis adriatica* (Kützing)	+*		
C	*Podosira hormoides* (Mont.) Kützing	+	+	
C	*Podosira stelliger* (Bailey) Mann	+*		
C	*Proboscia alata* (Brightwell) Sundström [syn. *Rhizosolenia alata* Brightwell]	+	+	+
C	*Proboscia indica* (Peragallo) Hernández-Becerril [syn. *Rhizosolenia alata* Brightwell f. *indica* (Peragallo) Gran]	+	+	+
P	*Psammodictyon panduriforme* (Gregory) Meunier [syn. *Nitzschia panduriformis* Gregory]	+		+
P	*Pseudo-nitzschia* spp. Peragallo	+	+	+
C	*Pseudosolenia calcar-avis* (Schultze) Sundström [syn. *Rhizosolenia calcar-avis* Schultze]	+	+	+
P	*Pyxidicula mediterranea* Grunow	+*		
P	*Rhabdonema adriaticum* Kützing	+	+	+
P	*Rhabdonema minutum* Kützing	+*		
P	*Rhaphoneis amphiceros* (Ehrenberg) Ehrenberg	+*		
P	*Rhaphoneis nitida* (Gregory) Grunow	+*		
P	*Rhaphoneis surirella* (Ehrenberg) Grunow	+*		
C	*Rhizosolenia acuminata* (H. Peragallo) H. Peragallo			+
C	*Rhizosolenia castracanei* Peragallo	+	+	+
C	*Rhizosolenia hebetata* Bailey			+
C	*Rhizosolenia imbricata* Brightwell	+	+	+

Tab. 2. – continued

		N	M	S
C	*Rhizosolenia setigera* Brightwell	+	+	
C	*Rhizosolenia styliformis* Brightwell	+	+	
P	*Rhopalodia gibberula* (Ehrenberg) Müller	+*		
P	*Rhopalodia musculus* (Kützing) Müller	+*		
P	*Scoliopleura tumida* Brébisson	+*		
C	*Skeletonema costatum* (Greville) Cleve	+	+	+
P	*Stauroneis gregori* Ralfs	+*		
P	*Stauroneis quarnerensis* Grunow			+
C	*Stellarima stellaris* (Roper) Hasle et Sims [syn. *Coscinodiscus stellaris* Roper]	+	+	+
P	*Striatella delicatula* (Kützing) Grunow	+		
P	*Striatella unipunctata* (Lyngbye) Agardh	+	+	+
P	*Surirella baldjicki* Norman	+*		
P	*Surirella comis* A. Schmidt	+*		
P	*Surirella fastuosa* (Ehrenberg)	+*	+	
P	*Surirella fluminensis* Grunow	+*		
P	*Surirella hybrida* Grunow	+*		
P	*Surirella intercedens* A. Schmidt	+*		
P	*Surirella ovalis* Brébisson	+*		
P	*Surirella ovata* Kützing	+*		
P	*Surirella reniformis* Grunow	+*		
P	*Synedra bacillaris* (Grunow) Hustedt [syn. *Ardissonia superba* (Kützing) Grunow]	+*		
P	*Synedra baculus* Gregory	+		+
P	*Synedra barbatula* Kützing	+*		
P	*Synedra brockmannii* Hustedt	+*		
P	*Synedra crystallina* (Agardh) Kützing	+		+
P	*Synedra distinguenda* Hustedt	+*		
P	*Synedra formosa* Hantzsch	+*		
P	*Synedra fulgens* (Greville) W.Smith	+		+
P	*Synedra gailloni* Ehrenberg	+	+	
P	*Synedra hennedyana* Gregory	+*		
P	*Synedra investiens* W. Smith	+*		
P	*Synedra laevigata* Grunow	+*		
P	*Synedra longissima* Smith			+
P	*Synedra pulcherrima* Hantzsch	+*		
P	*Synedra robusta* Ralfs	+*		
P	*Synedra tabulata* (Agardh) Kützing	+*		
P	*Synedra toxoneides* Castracane			+
P	*Synedra ulna* (Nitzsch) Ehrenberg	+		+
P	*Thalassionema frauenfeldii* (Grunow) Hallegraeff	+	+	+
P	*Thalassionema nitzschioides* (Grunow) Mereschkowsky	+	+	+
C	*Thalassiosira angulata (*Gregory) Hasle [syn. *Thalassiosira decipiens* (Grunov) Jørgensen]	+	+	+
C	*Thalassiosira eccentrica* (Ehrenberg) Cleve	+	+	+
C	*Thalassiosira gravida* Cleve	+		

Tab. 2. – continued

		N	M	S
C	*Thalassiosira leptopus* (Grunow) Hasle et Fryxell [syn. *Coscinodiscus lineatus*]	+	+	+
C	*Thalassiosira mediterranea* (Schröder) Hasle	+*		
C	*Thalassiosira nordenskioeldii* Cleve			+
C	*Thalassiosira oestrupii* (Ostenfeld) Hasle [syn. *Coscinosira oestrupii* Ostenfeld]	+*		
C	*Thalassiosira rotula* Meunier	+		+
C	*Thalassiosira subtilis* (Ostenfeld) Gran	+		
P	*Thalassiothrix longissima* Cleve et Grunow	+	+	+
P	*Toxarium undulatum* Bailey [syn. *Synedra undulata* (Bailey) Gregory]	+	+	+
P	*Toxoneis insignis* Donkin	+*		
P	*Toxonidea balearica* Grunow	+		+
P	*Trachyneis aspera* (Ehrenberg) Cleve [syn. *Navicula aspera* (Ehrenberg)]	+*		
P	*Trachysphaenia australis* Petit	+*		
C	*Triceratium alternans* Bailey	+*		
C	*Triceratium antediluvianum* Ehrenberg	+		+
C	*Triceratium broeckii* Lauduger – Fortmorel			+
C	*Triceratium favus* Ehrenberg	+*		
C	*Triceratium spinosum* Bailey	+*		
P	*Tropidoneis elegans* (W. Smith) Cleve	+*		

Tab. 3. List of euglenophytes, dinoflagellates and chlorophytes (with common synonyms) – determined along the eastern part of the northern (N), middle (M) and southern (S) Adriatic Sea. * Registered by REVELANTE (1985), subsequently not found. The list is supplemented with some heterotrophic species, which have been usually determined by phytoplanktologists.

	N	**M**	**S**
EUGLENOPHYTA			
Eutreptia lanowii Steuer		+	+
DINOPHYTA			
Alexandrium minutum Halim	+*	+	
Amphidinium acutissimum Schiller		+	+
Amphidinium conus Schiller		+	
Amphidinium curvatum Schiller		+	
Amphidinium globosum Schröder	+	+	
Amphidinium lanceolatum Schröder		+	
Amphidinium lissae Schiller		+	
Amphidinium longum Lohmann		+	
Amphidinium stigmatum Schiller		+	
Amphisolenia bidentata Schröder	+	+	+

Tab. 3. – continued

	N	M	S
Amphisolenia globifera Stein			+
Amphisolenia palmata Stein	+		
Amphisolenia spinulosa Kofoid			+
Brachidinium capitatum Taylor			+
Centrodinium eminens Böhm			+
Ceratium arietinum Cleve	+	+	+
Ceratium azoricum Cleve	+*		
Ceratium candelabrum (Ehrenberg) Stein	+		+
Ceratium carriense Gourret	+	+	+
Ceratium concilians Jörgensen	+		+
Ceratium contortum (Gourret) Cleve [syn. *C. arcuatum* (Gourret) Cleve, *C. euarcuatum* Jörgensen, *C. karstenii* Pavilard]	+	+	+
Ceratium contrarium (Gourret) Pavillard [syn. *C. inflexum*]	+	+	
Ceratium declinatum (Karsten) Jörgensen	+	+	
Ceratium digitatum Schütt	+*		
Ceratium euarcuatum Jörgensen [syn. *C. arcuatum*]	+	+	+
Ceratium extensum (Gourret) Cleve	+	+	+
Ceratium falcatum (Kofoid) Jörgensen	+	+	+
Ceratium furca (Efrenb.) Claparéde et Lachmann	+	+	+
Ceratium fusus (Ehrenberg) Dujardin	+	+	+
Ceratium gibberum Gourret	+	+	+
Ceratium gravidum Gourret		+	+
Ceratium heterocamptum (Jörgensen) Ostenfeld et Schmidt	+		
Ceratium hexacanthum Gourret	+	+	+
Ceratium horridum (Cleve) Gran [syn. *Ceratium buceros* Zacharias emend Böhm in Schiller]	+	+	+
Ceratium inflatum (Kofoid) Jörgensen	+	+	
Ceratium kofoidii Jörgensen	+	+	+
Ceratium limulus (Gourret) Pouchet	+*		
Ceratium lineatum (Ehrenberg) Cleve	+	+	
Ceratium longipes (Bailey) Gran	+*	+	
Ceratium longirostrum Gourret	+	+	+
Ceratium longissimum (Schröder) Kofoid	+	+	
Ceratium lunula (Schimper) Jörgensen	+*		
Ceratium macroceros (Ehrenberg) Cleve	+	+	+
Ceratium massiliense (Gourret) Jörgensen	+	+	+
Ceratium mole Kofoid	+*		
Ceratium pavillardii Jörgensen	+	+	+
Ceratium pentagonum Gourret	+	+	+
Ceratium platycorne Daday	+		+
Ceratium ranipes Cleve	+	+	+
Ceratium schroeteri Schröder	+*		
Ceratium setaceum Jörgensen	+	+	+
Ceratium symmetricum Pavillard	+	+	+
Ceratium teres Kofoid	+	+	
Ceratium trichoceros (Ehrenberg) Kofoid	+	+	+

Tab. 3. – continued

	N	M	S
Ceratium tripos (Müller) Nitzsch	+	+	+
Ceratium vultur Cleve			+
Ceratocorys armata (Schütt) Kofoid		+	+
Ceratocorys gourettii Paulsen			+
Ceratocorys horrida Stein	+	+	+
Cladopyxis brachiolata Stein			+
Cladopyxis caryophyllum (Kofoid) Pavillard			+
Coolia monotis Meunier [syn. *Ostreopsis monotis, Glenodinium monotis* (Meunier) Biecheler]		+	
Corythodinium constrictum (Stein) F.J.R.Taylor [syn. *Oxytoxum constrictum* (Stein) Bütschli]	+	+	+
Corrythodinium tesselatum (Stein) Loeblich Jr. et Loeblich III [syn. *Oxytoxum tesselatum* (Stein) Schütt]	+		+
Dinophysis acuminata Claparéde et Lachmann		+	+
Dinophysis acuta Ehrenberg	+		+
Dinophysis acutoides Balech	+	+	+
Dinophysis alata (Wood) Balech	+		
Dinophysis argus (Stein) Abe et Balech	+	+	+
Dinophysis biceps (Schiller) Balech	+		
Dinophysis caudata Seville-Kent [syn. *D. homunculus* Stein]	+	+	+
Dinophysis circumsuta (Karsten) Balech			+
Dinophysis dentata Schiller	+		
Dinophysis diegensis Kofoid	+		
Dinophysis dolychopterygium (Murray et Whitting) Balech [syn. *Phalacroma dolychopterygium* Murray et Whitting]	+		
Dinophysis doryphorum (Stein) Abe vel Balech [syn. *Phalacroma doryphorum* Stein]	+	+	
Dinophysis favus (Kofoid et Mich.) Abe et Balech		+	
Dinophysis fortii Pavillard	+	+	
Dinophysis hastata Stein	+	+	+
Dinophysis irregulare Lebour	+		
Dinophysis mitra (Schütt) Abe et Balech [syn. *Phalacroma mitra* Oltmanns]	+	+	+
Dinophysis operculata (Stein) Balech [syn. *Phalacroma operculatum* Stein]	+*		
Dinophysis ovum Schütt	+		
Dinophysis parvula (Schütt) Balech [syn. *Phalacroma parvulum* (Schütt) Jörgensen, *P. porodictyum Stein*]	+	+	+
Dinophysis pavillardii Schröder	+*		
Dinophysis planiceps (Schiller) Balech	+		
Dinophysis rapa (Stein) Balech [syn. *Phalacroma rapa* Stein]	+	+	
Dinophysis reticulata (Kofoid) Balech	+		+
Dinophysis sacculus Stein	+	+	
Dinophysis schroederi Pavillard		+	+
Dinophysis schuettii Murray et Whitting	+		+
Dinophysis sphaerica Stein	+		+

Tab. 3. – continued

	N	M	S
Dinophysis striata (Kofoid) Balech			+
Dinophysis tripos Gourret	+	+	+
Dinophysis uracantha Stein			+
Diplopsalis –complex	+	+	+
Dissodinium elegans Pavillard [syn. *Pyrocystis elegans*]			+
Dissodinium obtusum (Pavillard) Matzenauer]			+
Glenodinium danicum Paulsen		+	
Goniodoma polyedricum (Pouchet) Jörgensen [syn. *Triadinium polyedricum* (Pouchet) Dodge]	+	+	+
Gonyaulax birostris Stein			+
Gonyaulax digitale (Pouchet) Kofoid			+
Gonyaulax fragilis (Schütt) Kofoid	+		+
Gonyaulax grindleyi Reinecke	+		
Gonyaulax hyalina Ostenfeld et Schmidt			+
Gonyaulax kofoidii Pavillard	+		+
Gonyaulax longispina Lebour	+		
Gonyaulax mitra (Schütt) Kofoid	+		
Gonyaulax monacantha Pavillard	+	+	
Gonyaulax polygramma Stein	+	+	+
Gonyaulax spinifera (Claparéde et Lachmann) Diesing	+	+	
Gonyaulax verior Sournia [syn. *G. diacantha* (Meunier) Schiller]	+	+	+
Gymnodinium cucumis Schütt			+
Gymnodinium heterostriatum Kofoid et Swezy	+	+	
Gymnodinium simplex (Lohmann) Kofoid et Swezy	+	+	+
Gyrodinium fusiforme Kofoid et Swezy			+
Hemidinium mediterraneum Schiller		+	
Hermesinum adriaticum Zacharias	+	+	+
Heterocapsa triquetra (Ehrenberg) Balech		+	
Heterodinium milneri (Murray et Whitting) Kofoid			+
Heterodinium richardii Pavillard			+
Histioneis gubernans Schütt	+*		
Histioneis issellii Forti	+*		
Histioneis joergensenii Schiller		+	+
Histioneis kofoidii Forti et Issel	+*		
Kofoidinium velelloides Pavillard			+
Lingulodinium polyedrum (Stein) Dodge [syn. *Gonyaulax polyedra* Stein]	+	+	+
Mesoporus perforatus (Gran) Lillick [syn. *Porella perforata* (Gran) Schiller]	+		+
Noctiluca scintillans (Macartney) Kofoid et Swezy [syn. *Noctiluca miliaris* Suriray	+	+	+
Ornithocercus carolinae Kofoid			+
Ornithocercus heteroporus Kofoid			+
Ornithocercus magnificus Stein	+	+	+
Ornithocercus quadratus Schütt	+	+	+
Ornithocercus steinii Schütt		+	+

Tab. 3. – continued

	N	M	S
Oxyphysis oxytoxoides Kofoid	+		
Oxyrrhis marina Dujardin		+	
Oxytoxum adriaticum Schiller			+
Oxytoxum caudatum Schiller			+
Oxytoxum coronatum Schiller			+
Oxytoxum crassum Schiller	+		
Oxytoxum diploconus Stein		+	
Oxytoxum elegans Pavillard			+
Oxytoxum frenguellii Rampi			+
Oxytoxum gladiolus Stein			+
Oxytoxum globosum Schiller	+		
Oxytoxum laticeps Schiller			+
Oxytoxum longum Schiller	+		+
Oxytoxum milneri Murray et Whitting	+	+	+
Oxytoxum parvum Schiller	+		
Oxytoxum reticulatum (Stein) Schütt			+
Oxytoxum sceptrum (Stein) Schröder [syn. *O. longiceps* Schiller]	+	+	+
Oxytoxum scolopax Stein	+	+	+
Oxytoxum sphaeroideum Stein		+	+
Oxytoxum variabile Schiller			+
Peridinella catenata (Levander) Balech [syn. *Gonyaulax catenata* (Levander) Kofoid]	+		
Phalacroma rotundatum (Claparede et Lachmann) Kofoid et Michener [syn. *Dinophysis rotundata* (Claparéde et Lachmann)]	+	+	+
Podolampas bipes Stein	+	+	+
Podolampas elegans Schütt			+
Podolampas palmipes Stein	+	+	+
Podolampas spinifera Okamura		+	
Polykrikos kofoidii Chatton [syn. *P. schwarzi* Bütschli]		+	
Pronoctyluca acuta (Lohmann) Schiller	+		
Prorocentrum aporum (Schiller) Dodge	+		
Prorocentrum arcuatum Issel		+	
Prorocentrum balticum (Lohm.) Loeblich III [syn. *Exuviaella baltica* Lohmann]	+		
Prorocentrum compressum (Bailey) Abé ex Dodge [syn. *Exuviaella compressa* (Bailey) Ostenfeld]	+	+	+
Prorocentrum dentatum Stein	+		
Prorocentrum lima (Ehrenberg) Dodge [syn. *Exuviaella marina* Cienkowsky]	+	+	
Prorocentrum micans Ehrenberg	+	+	+
Prorocentrum minimum (Pavillard) Schiller	+	+	+
Prorocentrum scutellum Schröder	+	+	+
Prorocentrum triestinum Schiller [syn. *P. redfeldii* Bursa]	+	+	+
Prorocentrum vaginulum (Ehrenberg) Dodge	+		
Protoperidinium adriaticum (Broch) Balech	+		

Tab. 3. – continued

	N	M	S
Protoperidinium bipes (Paulsen) Balech [syn. *Minuscula bipes* (Paulsen) Lebour]	+		
Protoperidinium bispinum (Schiller) Balech	+		
Protoperidinium breve Paulsen	+		
Protoperidinium brevipes (Paulsen) Balech	+		
Protoperidinium brochii Kofoid et Swezy	+	+	+
Protoperidinium conicum (Gran) Balech	+	+	+
Protoperidinium crassipes (Kofoid) Balech	+	+	+
Protoperidinium depressum (Bailey) Balech	+	+	+
Protoperidinium diabolus (Cleve) Balech	+	+	+
Protoperidinium divergens (Ehrenberg) Balech	+	+	+
Protoperidinium globulus (Stein) Balech	+	+	+
Protoperidinium grande (Kofoid) Balech	+		
Protoperidinium granii Ostenfeld	+		
Protoperidinium leonis (Pavillard) Balech	+		+
Protoperidinium longispinum (Ostenfeld) Balech	+		
Protoperidinium marielebourae Paulsen	+*		
Protoperidinium oceanicum (Vanhöffen) Balech	+	+	+
Protoperidinium ovatum (Schiller) Balech	+	+	
Protoperidinium pallidum (Ostenfeld) Balech	+		
Protoperidinium pallidum (Ostenfeld) Balech	+	+	
Protoperidinium paulsenii (Pavillard) Balech			+
Protoperidinium pedunculatum (Bergh) Balech	+*		
Protoperidinium pellucidum Bergh	+	+	+
Protoperidinium pyriforme (Paulsen) Balech	+	+	
Protoperidinium quarnerense Schröder [syn. *Protoperidinium quarnerense* (Schröder) Balech, *P. globulus* var *quarnerense* Stein]	+*		
Protoperidinium solidicorne (Mangin) Diwald	+		+
Protoperidinium sphaericum (Murray et Whitting) Balech	+		
Protoperidinium steinii (Jörgensen) Balech	+	+	+
Protoperidinium tenuissimum (Kofoid) Balech	+		
Protoperidinium tristylum (Stein) Balech	+*		
Protoperidinium tubum (Schiller) Balech			+
Protoperidinium wiesneri (Schiller) Balech	+		
Pseliodinium vaubanii Sournia	+	+	+
Pyrocistis fusiformis Wyville–Thomson ex Murray [syn. *Dissodinium fusiforme* (Wyville–Thomson ex Murray) Matzenauer			+
Pyrocystis lunula (Schütt) Schütt [syn. *Dissodinium lunula* (Schütt) Pascher]	+		+
Pyrocystis noctiluca Murray ex Haeckel [syn. *P. pseudonoctiluca* Wyville – Thomson in J. Murray), *Dissodinium pseudonoctiluca* Swift ex Elbrächter et Drebes]	+		+
Pyrocystis robusta Kofoid			+
Pyrophacus horologicum Stein	+		+
Pyrophacus steinii (Schiller) Wall et Dale			+

Tab. 3. – continued

	N	**M**	**S**
Scrippsiella sp.	+		+
Scrippsiella trochoidea (Stein) Loeblich	+	+	
Spatulodinium pseudonoctiluca (Pouchet) Cachon et Cachon			+
Spiraulax kofoidii Graham [syn. *Spiraulax jollifei* (Murray et W. Whitting) Kofoid]	+	+	+
Triposolenia bicornis Kofoid			+
Triposolenia truncata Kofoid			+
Warnowia schuettii (Kofoid et Swezy) Schiller	+*		
CHLOROPHYTA			
Halosphaera viridis Schmitz	+	+	+