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ASIB – the Culture Collection of Algae at the Botanical Institute of the University at Innsbruck (Austria) Catalogue of Strains 1996

by

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ASIB – Die Sammlung von Algenkulturen am Institut für Botanik der Universität Innsbruck (Österreich) Kulturenverzeichnis 1996

Synopsis: Aus der über 2600 Stämme umfassenden Algensammlung am Institut für Botanik der Universität Innsbruck sind 379 Isolate (237 Arten aus 93 Gattungen) in alphabetischer Liste zusammengestellt. Ergänzende Hinweise über Herkunft, Isolator, Ökologie und Taxonomie sowie zur Identität der Stämme mit Subkulturen in anderen Kultursammlungen werden angeführt. Die Algensammlung in Innsbruck ist auf die Kultur von Boden-, Luft- und Flechtenalgen seit über 30 Jahren spezialisiert. Sämtliche Stämme stehen für wissenschaftliche Forschungen zur Verfügung.

1. Introduction:

The culture collection of algae at the University of Innsbruck (Austria) derived from a collection of soil algae started by H. PITSCHMANN and H. REISIGL in the early 1960s. The collection was expanded 1975 with W. VISCHER's culture collection from Basel (Switzerland). Today more than 2600 isolates are maintained, in this catalogue 379 strains (of 237 species and 93 genera) are included. The culture collection at Innsbruck maintains exclusively soil-, airborne and lichen algae. The cultures are presumed to be unialgal and originating from a single cell, but some of them contain bacteria. All strains are cultivated on agar slants (BBM, see BISCHOFF & BOLD 1963) under standard conditions (temperature 13° Celsius, light intensity 1300 - 3000 lux (maximum), cool-white fluorescent lamps on a 12/12 h L/D cycle). All cultures are available for research purpose without restrictions. To academic institutions and non-profit making investigators, the cost of each culture is 100.- ATS (Austrian Schilling), commercial organizations are charged 200.- ATS per culture plus forwarding expenses. Cultures are usually dispatched within 4 weeks of receipt of the order, using ordinary postal service. An invoice detailing the charges is sent to the recipient, payment by check, bank draft or money order is preferred. All payments should be addressed to Institut für Botanik der Universität Innsbruck, Algenkultursammlung, Sternwartestraße 15, A-6020 Innsbruck (Austria).

Explanatory notes on the list of strains: as in the previous lists (GÄRTNER 1985a, 1986) the cultures are listed alphabetically by genus and species. The strain number assigned to every isolate remains the same, regardless of any change in the nomenclature of the strain. Some names

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have been changed according to the acceptance by the scientific community. The synonyma can be found within the informations given for each strain. Nomenclature follows generally Ettl & Gärtner (1995). Other available data for each strain refer to the name of the isolator (written in capitals), date of isolation, ecology, geography and identity with strains in other collections. Strains described as "type material" have been directly derived from material, which had been used for the original description of the species (also known as authentic strain (Schlösser 1994) or type culture (Starr & Zeikus 1993). Publications with reference to the isolated strains are cited in parentheses (names of authors are written in standard letters).

Abbreviations of collections:

- CCAP = Culture Collection of Algae and Protozoa (Tompkins et al. 1995) c/o Institute of Freshwater Ecology, The Windermere Laboratory, Far Sawrey, Ambleside, Cumbria LA22 0LP, UK.
- ATCC = American Type Culture Collection (Daggett & Nerad 1985), c/o Rockville, Maryland 20852-1776, USA.
- SAG = Sammlung von Algenkulturen (Schlösser 1994), c/o Pflanzenphysiologisches Institut der Universität Göttingen, Nikolausberger Weg 18, D-37073 Göttingen, F.R.G.
- UTEX = Culture Collection of Algae (Starr & Zeikus 1993), c/o Department of Botany, The University of Texas at Austin, Austin, Texas 78713-7640, USA.
- ASIB = Algensammlung Innsbruck (formerly IBSG), the collection is registered as no. 505 in the World Directory of Collections of Cultures of Microorganisms (Sugawara et al. 1993).

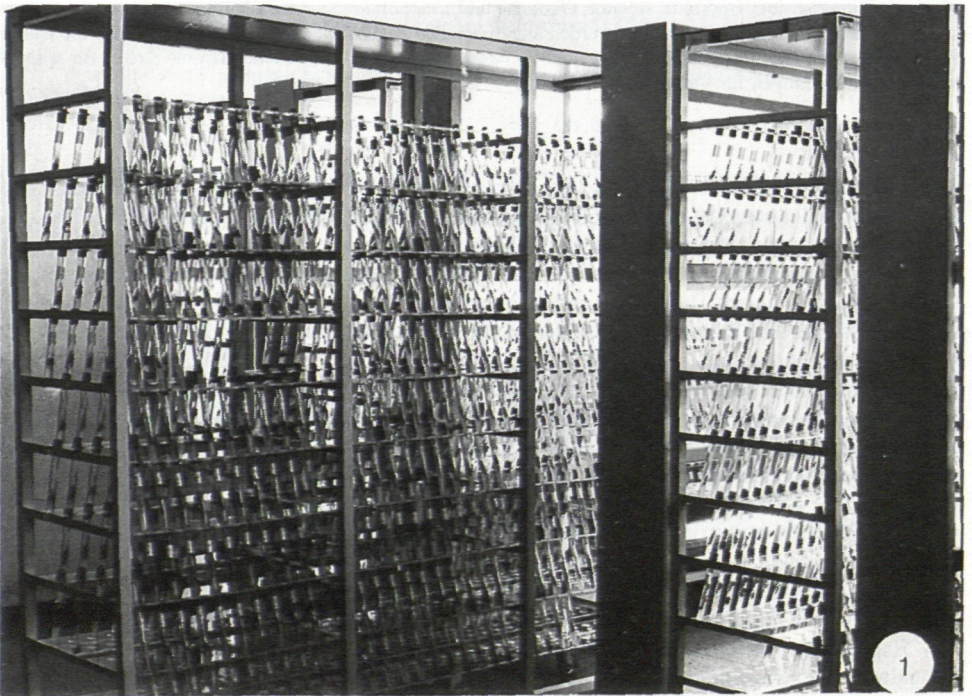


Fig. 1: Cultivation room; storage of the algal cultures in agar tubes on moveable racks.



Fig. 2: Shelves made of acryl-glass to enable light diffusion within the racks.

2. List of cultures:

Actinochloris Korshikov

Actinochloris terrestris (Vischer) Ettl & Gärtner

BS 321 W. VISCHER, 1945, soil, Unterengadin (Switzerland); type material; formerly *Asterococcus terrestris* Vischer; = *Radiosphaera dissecta* (Korsh.) Starr in UTEX 460, = CCAP 3/2b = SAG 247-1b; (Vischer 1945a, Ettl & Gärtner 1988)

Apatococcus Brand

Apatococcus lobatus (Chod.) Petersen emend. Vischer

G 177 G. GÄRTNER, 1974, bark, Innsbruck (Austria)
S 183 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
V 216 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Borodinellopsis Dykstra

Borodinellopsis texensis Dykstra

- IB 367 R.F. DYKSTRA, 1971, soil, Mustang Island, Texas (USA); type material = UTEX 1593; (Dykstra 1971)

Botrydiopsis Borzi

Botrydiopsis alpina Vischer

- IB 504 W. VISCHER, 1940, soil, Switzerland; type material; = SAG 801-6 = UTEX 295; (Vischer 1945)

Botrydiopsis arhiza Borzi

- IB 505 E.G. PRINGSHEIM, soil, England; = CCAP 806/2 = UTEX 87

Botrydiopsis callosa Trenkwalder

- T 12 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); type material; (Trenkwalder 1975, 1975a)
V 182 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)
V 183 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); = SAG 30.83

Botrydiopsis intercedens Pascher

- BS 171 E.G. PRINGSHEIM; = SAG 806-3 = UTEX 296

Botrydiopsis pyrenoidosa Trenkwalder

- T 11 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); type material; = SAG 31.83

Bracteaococcus Tereg

Bracteaococcus aeriis Bischoff & Bold

- IB 498 R.M. BROWN, 1960, airborne dust, Austin, Texas (USA); type material; = UTEX 1250; (Bischoff & Bold 1963)

Bracteaococcus cinnabarinus (Kol & F. Chod.) Starr

- BS 162 F. CHODAT, 1934, soil, Engadin (Switzerland); type material; formerly *Dictyococcus cinnabarinus* (Kol & F. Chod.) Vischer; = CCAP 221/2 = UTEX 56; (Kol & F. Chodat 1934, Vischer 1936)

Bracteaococcus cohaerens Bischoff & Bold

- IB 499 H.W. BISCHOFF, 1959, soil, Texas (USA); type material; = UTEX 1272; (Bischoff & Bold 1963)

Bracteaococcus engadinensis (Kol & F. Chod.) Starr

- BS 163 F. CHODAT, 1934, soil, Engadin (Switzerland); type material; formerly *Bracteaococcus terrestris* (Kol & F. Chodat) Starr; = CCAP 221/4 = SAG 221-4 = UTEX58; (Kol & F. Chodat 1934, Vischer 1936)
BS 164 F. CHODAT, 1934, soil, Engadin (Switzerland); type material; formerly *Dictyococcus engadinensis*; = CCAP 221/3 = SAG 221-3 = UTEX 57; (Kol & Chodat 1934, Vischer 1936)

Bracteaococcus giganteus Bischoff & Bold

- IB 500 H.W. BISCHOFF, 1960, soil, Texas (USA); type material; = UTEX 1251; (Bischoff & Bold 1963)

Bracteaococcus grandis Bischoff & Bold

- IB 501 H.W. BISCHOFF, 1957, soil, Texas (USA); type material; = UTEX 1246; (Bischoff & Bold 1963)
S 39 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Bracteaococcus medionucleatus Bischoff & Bold

- IB 502 H.W. BISCHOFF, 1960, soil, Texas (USA); type material; = UTEX 1244; (Bischoff & Bold 1963)

Bracteacoccus minor (R. Chod.) Petrova

- IB 503 R. CHODAT, since 1896 in culture (Coll. Geneva); type material; = CCAP 221/1 = SAG 221-1
= UTEX 66; (Starr, 1955)
S 15 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
V 85 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Bracteacoccus cf. *pseudominor* Bischoff & Bold

- T 65 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Bumilleriopsis Printz

Bumilleriopsis fuliformis Vischer

- BS 360 W. VISCHER, 1943, soil, Engadin (Switzerland); type material; = CCAP 809/2 = SAG 809-2
= UTEX 309; (Vischer 1945)

Calothrix Agardh

Calothrix crustacea Schousboe & Thuret s.l.

- S 318 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
S 319 K. SCHWARZ, 1975, Isle of Lavsa (Jugoslavia)

Calothrix parietina (Nägeli) Thuret

- V 161 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Characium A. Braun

Characium astipitatum Metting

- IB 393 B. METTING, 1980, soil, Whitman County, Washington (USA); type material; = UTEX 2250;
(Metting 1980)

Characiopodium Floyd & S. Watanabe in Floyd et al.

Characiopodium californicum (Lee & Bold) Floyd & S. Watanabe in Floyd et al.

- IB 394 R.C. STARR, soil, Lemon Cove, California (USA); type material; formerly *Characium cali-*
formicum Lee & Bold; = SAG 25.85 = UTEX 2097; (Lee & Bold 1974, Ettl & Gärtner 1995)

Characiopodium pseudopolymorphum (Philipose) Floyd & S. Watanabe in Floyd et al.

- IB 504 F.R. TRAINOR, soil, Georgia (USA); type material; formerly *Characium polymorphum* Train-
or & Bold; = ATTC 30439 = SAG 209-2 = UTEX 129; (Ettl & Gärtner 1995)

Cedercreutzella Vischer

Cedercreutzella savoniensis Vischer

- BS 591 W. VISCHER, 1950, wall, Savonlinna (Finland); type material; (Vischer 1960)

Chlamydocapsa Fott

Chlamydocapsa ampla (Kützing) Fott

- IB 397 W. KOCH, 1973, bog pool, Ireland; = SAG 19.79

Chlamydocapsa maxima (Mainx) Ettl & Gärtner

- IB 428 F. MAINX, 1925, pond Wobern near Hirschberg (Czechoslovakia); type material; formerly
Gloeococcus maximus (Mainx) Fott & Nováková; = CCAP 31/1 = SAG 31-1 = UTEX 166;
(Fott & Nováková 1972, Ettl & Gärtner 1987)

Chlamydomonas Ehrenberg

Chlamydomonas applanata Pringsheim

- T 40 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Chlamydomonas chlorococcoides Ettl & Schwarz

- IB 390 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia); type material; = SAG 15.82; (Ettl &
Schwarz 1981)

- S 73 K. SCHWARZ as *C. concinna* Gerloff, 1975, Isle of Lavsa (Jugoslavia); = SAG 16.82; (Schlösser 1994)

Chlamydomonas culleus Ettl

- V 46 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Chlamydomonas minutissima Korshikov

- S 87 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Chlamydomonas moewusii Gerloff

- BS 728 E. PRINGSHEIM? "1954 from E. PRINGSHEIM, Göttingen" (Germany)

Chlamydomonas muciola Schmidle

- S 103 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Chlamydomonas perpusilla Gerloff

- S 88 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Chlamydomonas peterfii Gerloff

- V 50 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Chlamydomonas planoconvexa Lund

- T 37 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Chlamydomonas proboscigera Korshikov in Pascher

- G 222 G. GÄRTNER, 1974, soil Hoggar desert, Sahara (Algeria); formerly *Chlamydomonas sphaeroides* Gerloff; = SAG 4.83

Chlamydomonas radiata Deason & Bold

- T 41 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Chlamydomonas rapa Ettl

- S 87 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Chlamydropodium Ettl & Komarek

Chlamydropodium starrii (Fott) Ettl & Gärtner

- IB 398 R.C. STARR, 1951, dry soil, Cape Town (South Africa); type material; formerly *Characium saccatum* Filarszky; = CCAP 209/1A = SAG 16.87 = UTEX 111 (+ strain); (Ettl & Gärtner 1987)

Chlorella Beijerinck

Chlorella ellipsoidea Gerneck

- G 100 G. GÄRTNER, 1974, bark, Innsbruck (Austria); formerly *Chlorella saccharophila* var. *ellipsoidea* (Gern.) Fott & Novakova

Chlorella cf. *homosphaera* Skuja

- S 58 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

- T 84 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Chlorella cf. *protothecoides* Krüger

- T 83 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Chlorella saccharophila (Krüger) Migula

- V 37 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

- T 82 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); formerly *Chlorella saccharophila* var. *saccharophila* Fott & Novakova

- T 81 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); formerly *Chlorella saccharophila* var. *ellipsoidea* (Gern.) Fott & Nováková

Chlorella vulgaris Beijerinck

- S 51 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

- T 79 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); form 1
T 80 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy), form 2
V 17 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); form 1
V 22 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy), form 2
V 28 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy), form 3

Chlorellidium Vischer & Pascher

Chlorellidium tetrabotrys Vischer & Pascher

- S 153 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
S 154 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Chloridella Pascher

Chloridella neglecta (Pascher & Geitler) Pascher

- BS 216 W. VISCHER, 1940, soil, Unterengadin (Switzerland); = CCAP 813/1 = UTEX 431

Chlorocloster Pascher

Chlorocloster engadinensis Vischer

- BS 252 W. VISCHER, 1940, soil, Unterengadin (Switzerland); type material; = CCAP 812/1 = UTEX 307; (Vischer 1945)

Chlorococcum Meneghini

A n m e r k u n g : Nomenklatorische Änderungen siehe auch bei Gärtner & Ettl (1988), Ettl & Gärtner (1995); hier sind die Kulturen noch in Anlehnung an die Verzeichnisse SAG (Schlösser 1994) und UTEX (Starr & Zeikus 1993) aufgeführt.

Chlorococcum acidum Archibald & Bold

- IB 400 P.A. ARCHIBALD, 1970, peat bog, Elkhart, Indiana (USA); type material; = UTEX 1766 (Ettl & Gärtner 1988)

Chlorococcum arenosum Archibald & Bold

- IB 401 H.C. BOLD, 1970, soil, Port Isabel, Texas (USA); type material; = UTEX 1767; (Ettl & Gärtner 1988)

Chlorococcum aureum Archibald & Bold

- IB 402 A.M. HOFSTETTER, 1970, soil, Nashville, Tennessee (USA); type material; = UTEX 1768; (Ettl & Gärtner 1988)

Chlorococcum citrifforme Archibald & Bold

- IB 403 P.A. ARCHIBALD, 1970, peat bog, Elkhart, Indiana (USA); type material; = SAG 62.80 = UTEX 1769; (Ettl & Gärtner 1988)

Chlorococcum chlorococcoides (Kors.) Philipose

- T 48 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); formerly *Hypnomonas chlorococcoides* Korshikov

- V 48 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); formerly *Hypnomonas chlorococcoides* Korshikov

Chlorococcum costatozygotum Ettl & Gärtner

- T 51 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); (Ettl & Gärtner 1987, 1988)

Chlorococcum croceum Archibald & Bold

- IB 404 A.M. HOFSTETTER, 1970, soil, Nashville, Tennessee (USA); type material; = UTEX 1770; (Ettl & Gärtner 1988)

Chlorococcum echinozygotum Starr

- IB 405 R.C. STARR, 1952, soil, San Marcellino, Luzon (Philippines); type material; CCAP 213/5 = SAG 213-5 = UTEX 118; (Starr 1955, Ettl & Gärtner 1988)

Chlorococcum ellipsoideum Deason & Bold

- IB 406 T.R. DEASON; 1957, soil, Williamson County, Texas (USA); type material; = UTEX 972; (Deason & Bold 1960)
IB 407 H. HINDAK, peat bog, Czechoslovakia; formerly *Hypnomonas ellipsoidea* Korshikov; = UTEX 1376
IB 408 H. ETTL, formerly *Hypnomonas chlorococcoides* Korshikov; = SAG 68.72
IB 409 E. HEGEWALD, 1973, Laguna Huaypo, Dept. Cuzco (Peru); = strain Hegewald 1973-20 (Jülich); (Ettl & Gärtner 1988)

Chlorococcum hypnosporum Starr

- IB 410 R.C. STARR, soil, Bledsoe County, Tennessee (USA); type material; = CCAP 213/6 = SAG 213-6 = UTEX 119; (Starr 1955)

Chlorococcum infusionum (Schrank) Meneghini

- IB 411 F. MAINX, before 1939, Czechoslovakia; neotype of the genus *Chlorococcum*; = Praha A-91 = CCAP 213/2a = SAG 10.86; (Ettl & Gärtner 1987, 1988)

Chlorococcum lacustre Archibald & Bold

- IB 412 P.A. ARCHIBALD, 1970, peat bog, Elkhart, Indiana (USA); type material; = UTEX 1775; (Archibald & Bold 1970, Ettl & Gärtner 1988)

Chlorococcum macrostigmatum Starr

- IB 415 R.A. LEWIN, soil, Connecticut (USA); type material; = CCAP 213/9 = UTEX 109; (Starr 1953)

Chlorococcum microstigmatum Archibald & Bold

- IB 415 P.A. ARCHIBALD, 1970, soil, Elkhart, Indiana (USA); type material; = UTEX 1777; (Archibald & Bold 1970, Ettl & Gärtner 1988)

Chlorococcum minimum Ettl & Gärtner

- T 50 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); type material; (Ettl & Gärtner 1987, 1988)

Chlorococcum nivale Archibald

- IB 416 F. HINDAK, snow detritus, Tatra Mountains (Czechoslovakia); type material; = UTEX 2225; (Archibald 1979, Ettl & Gärtner 1988)

Chlorococcum novae-angliae Archibald & Bold

- IB 417 P.A. ARCHIBALD, 1970, bog, Falmouth, Barnstable County, Massachusetts (USA); type material; = UTEX 1778; (Archibald & Bold 1970, Ettl & Gärtner 1988)

Chlorococcum paludosum Archibald & Bold

- IB 418 P.A. ARCHIBALD, 1970, peat bog, Elkhart, Indiana (USA); type material; = UTEX 1779; (Archibald & Bold 1970, Ettl & Gärtner 1988)

Chlorococcum perplexum Archibald & Bold

- IB 419 P.A. ARCHIBALD, 1970, peat bog, Elkhart, Indiana (USA); type material; = UTEX 1780; (Archibald & Bold 1970, Ettl & Gärtner 1988)

Chlorococcum cf. *perforatum* Arce & Bold

- V 170 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Chlorococcum refringens Archibald & Bold

- IB 421 P.A. ARCHIBALD, 1970, peat bog, Elkhart, Indiana (USA); type material; = UTEX 1783; (Archibald & Bold 1970, Ettl & Gärtner 1988)

Chlorococcum salsugineum Archibald & Bold

- IB 422 P.A. ARCHIBALD, 1970, bog, Falmouth, Barnstable County, Massachusetts (USA); type material; = UTEX 1786; (Archibald & Bold 1970, Ettl & Gärtner 1988)

Chlorococcum scabellum Deason & Bold

- IB 423 T.R. DEASON, 1960, soil, Williamson County, Texas (USA); type material; = UTEX 1233; (Deason & Bold 1960)

- S 219 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
S 220 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
S 221 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Chlorococcum schwarzii Ettl & Gärtner

- T 47 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); formerly *Hypnomonas schizochlamys* Korshnikov; (Ettl & Gärtner 1988)

Chlorococcum typicum Archibald & Bold

- IB 424 P.A. ARCHIBALD, 1970, soil, Summit County, Ohio (USA); type material; = UTEX 1789; (Archibald & Bold 1970, Ettl & Gärtner 1988)

Chlorococcum uliginosum Archibald & Bold

- IB 425 P.A. ARCHIBALD, 1970, peat bog, type material; = UTEX 1790; (Archibald & Bold 1970, Ettl & Gärtner 1988)

Chlorococcum vacuolatum Starr

- IB 426 R.C. STARR, 1952, soil, Cape Flats (South Africa); type material; = CCAP 213/8 = SAG 213-8 = UTEX 110; (Starr 1953)

Chlorokybus Geitler

Chlorokybus atmophyticus Geitler

- IB 505 A. RIETH, 1962, from culture, Italy; = CCAP 403/1 = SAG 48.80 = UTEX 2591; (Schlösser 1994)
T 106 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)
V 202 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Chloromonas Gobi emend. Wille

Chloromonas rosae (Ettl H. & O.) Ettl

- V 204 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Chlorosarcina Gerneck emend. Vischer

Chlorosarcina brevispinosa Chantanachat & Bold

- S 166 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Chlorosarcinopsis Herndon

Chlorosarcinopsis minor (Gerneck) Herndon

- T 104 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Cocciobotrys R. Chodat em. Vischer

Cocciobotrys verrucariae Chod. emend. Vischer

- BS 175 R. CHODAT, 1913, phycobiont (*Verrucaria*); type material; (Vischer 1960)

Coccomyxa Schmidle

Coccomyxa brevis (Vischer) Gärtner & Schragl

- BS 319 W. VISCHER, 1941, soil, Unterengadin (Switzerland); type material; formerly *Nephrodiella brevis* Vischer; = ATCC 30440 = CCAP 850/1 = SAG 850-1 = UTEX 152; (Vischer 1945, Gärtner & Schragl 1988)

Coccomyxa cf. *confluens* (Kütz.) Fott

- V 16 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); formerly *Coccomyxa* cf. *dispar* Schmidle

Coccomyxa sp.

- T 90 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); form 1
T 91 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); form 2
T 92 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); form 3
V 7 G. VINATZER, 1975, Dolomites, South Tyrol (Italy); form 1

- V 9 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); form 2
V 11 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); form 3

Coelastrella Chodat

Coelastrella striolata var. *multistriata* (Trenkw.) Kalina & Puncoch.

- T 88 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); type material; formerly *Scotiella multistriata* Trenkwalder; (Trenkwalder 1975, 1975a)

Coelastrum Nägeli

Coelastrum proboscideum Bohlin var. *dilatatum* Vischer

- BS 13 W. VISCHER, 1924, water pond, Neudorf (Switzerland); type material; = CCAP 217/2 = SAG 217-2 = UTEX 282

Coelastrum proboscideum Bohlin var. *gracile* Vischer

- BS 15 W. VISCHER, 1924, water pond, Neudorf (Switzerland); type material; = ATCC 30410 = CCAP 217/3 = SAG 217-3 = UTEX 184

Coleochlamys Korshikov

Coleochlamys perforata (Lee & Bold) Ettl & Gärtner

- IB 395 F. HINDAK, 1962, snow detritus, Belanske Tatry Mountains (Czechoslovakia); type material; formerly *Characium perforatum* Lee & Bold; = SAG 28.85 = UTEX 2104; (Lee & Bold 1974, Ettl & Gärtner 1995)

Cosmarium Corda

Cosmarium anceps Lund

- V 231 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Cosmarium curtum (Brebisson) Ralfs

- T 111 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Cosmarium decedens (Reinsch) Racib.

- T 110 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Cylindrocystis Meneghini

Cylindrocystis brebissonii (Menegh.) de Bary

- V 233 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Cylindrocystis brebissonii var. *minor* West & West

- V 234 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Deasonia Ettl & Komarek

Deasonia multinucleata (Deason & Bold) Ettl & Komarek

- IB 386 T.R. DEASON, 1960, soil, Texas (USA); type material, formerly *Neosporangiococcum multinucleatum* (Deason & Bold) Deason; = UTEX 976; (Ettl & Gärtner 1987, 1988)

Deasonia prolifera (Deason) Ettl & Komarek

- IB 278 A.M. HOFSTETTER, 1971, soil, Tennessee (USA); type material; formerly *Neosporangiococcum proliferum* Deason; = UTEX 1846; (Ettl & Gärtner 1987, 1988)

Deasonia saccata (Deason) Ettl & Komarek

- IB 276 A.M. HOFSTETTER, 1971, soil, Tennessee (USA); type material; formerly *Neosporangiococcum saccatum* Deason; = UTEX 1843; (Ettl & Gärtner 1987, 1988)

Deasonia variabilis (Deason) Ettl & Komarek

- IB 389 A.M. HOFSTETTER, 1976, soil, Tennessee (USA); type material; formerly *Neosporangiococcum variabile* Deason; = UTEX 2122; (Ettl & Gärtner 1987, 1988)

Desmococcus Brand em. Vischer

Desmococcus olivaceus (Pers. ex Acharius) Laundon

- S 197 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia); formerly *Desmococcus vulgaris* Brand em. Geitler; (Ettl & Gärtner 1995)

Desmotetra Deason & Floyd

Desmotetra stigmatica (Deason) Deason & Floyd

- S 163 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia); formerly *Chlorosarcina stigmatica* Deason; (Ettl & Gärtner 1995)
T 105 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); formerly *Chlorosarcina stigmatica* Deason; (Ettl & Gärtner 1995)

Dictyochloris Vischer

Dictyochloris fragrans Vischer

- T 69 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)
V 179 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Dictyochloris sp.

- T 71 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Dictyochloropsis Geitler

Dictyochloropsis splendida Geitler

- IB 508 E. TSCHERMAK-WOESS, 1975, phycobiont, Graz (Austria); = CCAP 225/1 = SAG 244.80; (Tschermak-Woess 1978)
T 72 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Dictyochloropsis symbiontica Tschermak-Woess

- IB 509 E. TSCHERMAK-WOESS, 1983, phycobiont, Teneriffa (Spain); type material (of var. *pauciautosporica*); = SAG 12-86; (Tschermak-Woess 1984)
IB 510 E. TSCHERMAK-WOESS, 1981, phycobiont, New Zealand; = SAG 46.85; (Tschermak-Woess 1980)
IB 511 E. TSCHERMAK-WOESS, 1979, phycobiont, Lunz (Austria); type material; = SAG 27.81; (Tschermak-Woess 1980)

Dictyococcus Gerneck em. Vischer

Dictyococcus schumacherensis Metting

- IB 506 B. METTING, 1980, soil, Washington (USA); type material; = UTEX 2252; (Metting 1980)

Dictyococcus varians Gerneck em. Starr

- IB 507 R.C. STARR, 1951, pond, Scotland; type material; = CCAP 221/5 = SAG 221-5 = UTEX 62; (Starr 1955)

Diplosphaera Bialosuknia em. Vischer

Diplosphaera chodatii Bialosuknia em. Vischer

- S 184 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
V 219 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Diplosphaera sp.

- V 221 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)
T 108 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Elliptochloris Tschermak-Woess

Elliptochloris bilobata Tschermak-Woess

- IB 512 E. TSCHERMAK-WOESS, 1978, phycobiont, Austria; type material; = SAG 245.80; (Tschermak-Woess 1980)

Ettlia Komárek

Ettlia bilobata (Vinatzer) Komárek

- V 141 G. Vinatzer, 1975, soil, Dolomites, South Tyrol (Italy); type material; formerly *Neochloris bilobata* Vinatzer; (Vinatzer 1975, 1975a, Ettl & Gärtner 1995)
V 143 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); form 1 with smaller cells
T 58 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Ettlia cohaerens (Groover & Bold) Ettl & Gärtner

- IB 516 L. MILLIGER, 1965, soil, Texas (USA); type material; formerly *Neochloris cohaerens* Groover & Bold; = UTEX 1707; (Groover & Bold 1969, Ettl & Gärtner 1995)

Ettlia pseudoalveolaris (Deason & Bold) Komárek

- IB 515 T.R. DEASON, 1957, soil, Texas (USA); type material; formerly *Neochloris pseudoalveolaris* Deason & Bold; = UTEX 975; (Komárek 1989, Ettl & Gärtner 1995)
T 57 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); formerly *Neochloris pseudoalveolaris* Deason & Bold

Eustigmatos Hibberd

Eustigmatos vischeri Hibberd

- BS 241 W. VISCHER, 1940, soil, Unterengadin (Switzerland); formerly *Pleurochloris commutata* Pascher; = CCAP 860/1 = SAG 860-1 = UTEX 310; (Vischer 1945, Hibberd 1981)

Eustigmatos magnus (J.B. Petersen) Hibberd

- S 1 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia); formerly *Pleurochloris magna* Petersen
S 2 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia); formerly *Pleurochloris magna* Petersen
T 8 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); formerly *Pleurochloris magna* Petersen
V 1 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); formerly *Pleurochloris magna* Petersen
V 2 G. VINATZER, 1975, soil, Dolomites, South Tyrol I (Italy); formerly *Pleurochloris magna* Petersen

Eustigmatos polyphem (Pitschmann) Hibberd

- IB 207 H. PITSCHMANN, 1969, soil, Mt. Kenya (Kenya); type material; formerly *Pleurochloris polyphem* Pitschmann; = CCAP 860/8 = SAG 38.84; (Vischer 1945, Hibberd 1981)
IB 208 H. PITSCHMANN, 1969, soil, Mt. Kenya (Kenya); type material; formerly *Pleurochloris polyphem* Pitschmann; (Vischer 1945, Hibberd 1981)

Excentrochloris Pascher

Excentrochloris sp.

- V 189 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Follicularia Millér

Follicularia paradoxalis Millér

- IB 518 H. BISCHOFF & H.C. BOLD, 1960, soil, Texas (USA); type material, formerly *Planktosphaeria maxima* Bischoff & Bold; = UTEX 1248; (Bischoff & Bold 1963, Ettl & Gärtner 1995)

Fritschiella Iyengar

Fritschiella tuberosa Iyengar

- IB 513 H. ANDREWS, soil, USA; = SAG 112.80

Gloeotilopsis Iyengar & Philipose

Gloeotilopsis sterilis Deason

- IB 429 T.R. DEASON, 1964, soil, Dauphin Island, Alabama (USA); type material; = UTEX 1704; (Deason 1969)

Haematococcus C.A. Agardh em. Flotow

Haematococcus pluvialis Flotow em. Wille

BS 2 W. VISCHER, 1923, water reservoir, Basel (Switzerland)

Heterochlamydomonas Cox & Deason

Heterochlamydomonas inaequalis Cox & Deason

IB 430 E.R. COX, 1969, soil, Wilson County, Tennessee (USA); type material; = SAG 4.75 = UTEX 1705

Heterococcus Chodat

Heterococcus brevicellularis Vischer

BS 351 W. VISCHER, 1943, soil, Unterengadin (Switzerland); type material; = CCAP 835/1 = SAG 835-1 = UTEX 154; (Vischer 1945)

S 267 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Heterococcus caespitosus Vischer

BS 116 W. VISCHER, 1934, soil, Schmieheim, Freiburg (Germany); type material; = CCAP 835/2a = SAG 835-2a = UTEX 313; (Vischer 1936)

S 271 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Heterococcus marietanii Vischer

BS 167 W. VISCHER, 1936, spring, Montana, Wallis (Switzerland); type material; = CCAP 835/7 = SAG 835-7 = UTEX 350; (Vischer 1937)

Heterococcus versiculosus Pitschmann

V 111 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Heterococcus viridis R. Chodat

BS 161 R. CHODAT, 1908, Lake Geneva; type material; formerly *Heterococcus chodatii* = CCAP 835/3 = SAG 835-3 = UTEX 346; (Vischer 1936, Ettl & Gärtner 1995)

Hormidiospora Vinatzer

Hormidiospora verrucosa Vinatzer

V 199 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); type material; (Vinatzer 1975, 1975a)

Ignatius Bold & Mac Entee

Ignatius tetrasporus Bold & Mac Entee

IB 514 H.C. BOLD, 1974, soil, Pennsylvania (USA); type material; = UTEX 2012; (Bold & Mac Entee 1974)

Interfilum Chodat & Topali

Interfilum paradoxum Chodat & Topali

T 98 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Keratococcus Pascher

Keratococcus bicaudatus (A. Braun) J.B. Petersen

T 89 H. Trenkwaldner, 1975, soil, pine forest, Brixen, South Tyrol (Italy); formerly *Ourococcus bicaudatus* (A. Braun) Groberty

Klebsormidium Silva, Mattox & Blackwell

Klebsormidium dissectum (Gay) Ettl & Gärtner

V 103 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); formerly *Chlorhormidium dissectum* (Gay) Farooqui; (Ettl & Gärtner 1995)

Klebsormidium flaccidum (Kütz.) Silva, Mattox & Blackwell

- V 100 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); formerly *Chlorhormidium flaccidum* (Kützing) Fott
- T 95 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); form 2; formerly *Chlorhormidium flaccidum* (Kützing) Fott
- T 96 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); form 3; formerly *Chlorhormidium flaccidum* (Kützing) Fott
- T 97 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy); form 4; formerly *Chlorhormidium flaccidum* (Kützing) Fott

Klebsormidium marinum (Deason) Silva, Mattox & Blackwell

- S 206 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia); formerly *Hormidium marinum* Deason

Leptosira Borzi

Leptosira obovata Vischer

- BS 46 W. VISCHER, 1928 ?, swamp-water, Rosenau, Basel (Switzerland); type material; = CCAP 445/1 = SAG 445-1 = UTEX 319; (Vischer 1933)

Lobosphaera Reisigl

Lobosphaera tirolensis Reisigl

- S 234 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Macrochloris Korshikov

Macrochloris cohaerens (Vinatzer) Ettl & Gärtner

- V 176 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); type material; formerly *Chlorozebra cohaerens* Vinatzer; (Vinatzer 1975, 1975a, Ettl & Gärtner 1988)
- V 177 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); type material; formerly *Chlorozebra cohaerens* Vinatzer; (Vinatzer 1975, 1975a, Ettl & Gärtner 1988)

Macrochloris multinucleata (Reisigl) Ettl & Gärtner

- IB 1 H. REISIGL, 1969, soil, Cho Oyu, Himalaya (Nepal); type material; formerly *Chlorozebra multinucleata* Reisigl; (Reisigl 1969, Ettl & Gärtner 1988)
- IB 3 H. REISIGL, 1969, soil, Cho Oyu, Himalaya (Nepal); type material; formerly *Chlorozebra multinucleata* Reisigl; (Reisigl 1969, Ettl & Gärtner 1988)

Microcoleus Desmazieres

Microcoleus vaginatus (Vaucher) Gomont

- V 155 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)
- V 156 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Monodopsis Hibberd

Monodopsis unipapilla (Reisigl) Santos

- IB 63 H. REISIGL, 1964, soil, Ötztaler Alps, Tyrol (Austria); formerly *Monodus unipapilla* Reisigl; type material; = SAG 8.83; (Reisigl 1964, Santos 1990)

Muriella J.B. Petersen

Muriella decolor Vischer

- BS 29 W. VISCHER, 1926, swamp water, Rosenau (Switzerland); type material; = CCAP 249/2 = SAG 249-2 = UTEX 126; (Vischer 1936)

Muriella terrestris J.B. Petersen

- BS 108 W. VISCHER, 1933, tuff stone, Basel (Switzerland); type material; formerly *Muriella aurantiaca* Vischer; = ATCC 30413 = CCAP 249/1 = SAG 249-1 = UTEX 36; (Vischer 1936, Ettl & Gärtner 1995)
- T 86 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)
- V 38 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Muriella zofingiensis (Dönz) Hindak

- IB 505 O.C. DÖNZ, 1933, soil, Switzerland; type material; formerly *Chlorella zofingiensis* Dönz;
= ATCC 30412 = CCAP 211/14 = SAG 211-14 = UTEX 32; (Ettl & Gärtner 1995)

Myrmecia Printz

Myrmecia astigmatica Vinatzer

- V 73 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); type material; (Vinatzer 1975,
1975a)
V 74 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)
V 75 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)
T 76 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Myrmecia biatorellae (Tschermak-Woess & Plessl) J.B. Petersen

- V 76 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)
S 179 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
T 73 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Myrmecia incisa Reisigl

- IB 83 H. REISIGL, 1964, soil, Ötztaler Alps, Tyrol (Austria); type material; formerly *Lobococcus incisus* (Reisigl) Reisigl; (Reisigl 1964, Ettl & Gärtner 1995)

Nautococcus Korshikov

Nautococcus solutus Archibald

- IB 432 H.C. BOLD, 1972, soil, Bertram, Texas (USA); type material; = CCAP 53/2 = SAG 76.80 =
UTEX 1793; (Archibald 1972, Ettl & Gärtner 1988)

Neochloris Starr

Neochloris aquatica Starr

- IB 433 B. NORBY, 1952, sides of a small aquarium, Indiana University, Indiana (USA); type material;
= UTEX 138

Neochloris gelatinosa Herndon

- IB 517 W. HERNDON, 1952, soil, Jamaica; type material; = UTEX 754; (Herndon 1958, Ettl & Gärtner 1995)

Neochloris wimmeri (Rabenhorst) Archibald & Bold

- IB 434 F. MAINX, loc. unknown (Czechoslovakia); formerly *Chlorococcum wimmeri* Rabenhorst;
= CCAP 213/4 = SAG 213-4 = UTEX 113; (Archibald & Bold 1970)

Neochloris sp.

- V 149 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Neosporangiococcum Deason

Neosporangiococcum alabamense (Deason) Deason

- IB 368 T.R. DEASON, 1959, soil, Alabama (USA); type material; formerly *Sporangiococcum alabamense* Deason; = UTEX 960; (Deason 1959, 1976, Ettl & Gärtner 1988)

Neosporangiococcum butyrosum Deason & Cox

- IB 369 T.R. DEASON & E.R. COX, 1964, soil, Alabama (USA); type material; = UTEX 1840; (Deason & Cox 1971)

Neosporangiococcum commatiforme Deason

- IB 370 A.M. HOFSTETTER; 1966, soil, Memphis (USA); type material; = UTEX 2116; (Deason 1976)

Neosporangiococcum concentricum (Anderson & Nichols) Deason

- IB 371 NICHOLS, 1964, limestone spring (USA); type material; formerly *Sporangiococcum concentricum* Anderson & Nichols; = UTEX 1646; (Deason 1976)

Neosporangiococcum longisporum Deason

- IB 373 A.M. HOFSTETTER, 1966, soil, Memphis (USA); type material; = UTEX 2121; (Deason 1976)

Neosporangiococcum macropyrenoidosum Deason & Cox

- IB 280 T.R. DEASON & E.R. COX, 1964, soil, Tennessee (USA); type material; = UTEX 1839; (Deason & Cox 1971)

Neosporangiococcum mahleri Deason

- IB 374 P. MAHLER, 1963, soil, Austin (USA); type material; = UTEX 2119; (Deason 1976)

Neosporangiococcum mobile Deason & Cox

- IB 375 T.R. DEASON & E.R. COX, 1964, soil, Alabama (USA); type material; = UTEX 1841; (Deason & Cox 1971)

Neosporangiococcum vacuolatum Deason & Cox

- IB 281 T.R. DEASON & E.R. COX, 1964, soil, Tennessee (USA); type material; = UTEX 1838; (Deason & Cox 1971)

Nostoc Vaucher

Nostoc commune Vaucher

- V 157 G. VINATZER, 1975, soil, Dolomites, South Tyrol 1 (Italy); form 1
V 159 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); form 3
S 322 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
S 323 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
S 324 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
S 325 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
S 326 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Nostoc cf. *ellipso sporum* (Desmaziere) Bornet & Flahault

- S 321 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Nostoc cf. *muscorum* Agardh

- S 320 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
G 197 G. GÄRTNER, 1974, bark, Innsbruck (Austria)

Nostoc cf. *punctiforme* (Kütz.) Hariot

- T 3 H. TRENKWALDER; 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Nostoc cf. *verrucosum* Vaucher

- T 4 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Nostoc sp.

- T 5 H. TRENKWALDER; 1975, soil, pine forest, Brixen, South Tyrol (Italy)
BS 363 W. VISCHER, 1943, soil, Switzerland

Oscillatoria Vaucher

Oscillatoria sp.

- BS 594 W. VISCHER, Finland

Penium de Brebisson

Penium cf. *silvae nigrae* Rabanus

- T 112 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Planophila Gerneck

Planophila laetevirens Gerneck

- V 191 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Plectonema Thuret ex Gomont

Plectonema battersii Gomont

- S 334 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
S 335 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
S 336 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Plectonema sp.

- T 2 H. TRENKWALDER; 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Pleurastrum R. Chodat

Pleurastrum photoheterotrophicum Metting

- IB 519 B. METTING, 1980, soil, Washington (USA); type material; = UTEX 2249; (Metting 1980)

Pleurochloris Pascher

Pleurochloris meiringensis Vischer

- S 200 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)
T 9 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)
V 6 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Prasiolopsis Vischer

Prasiolopsis ramosa Vischer

- BS 456 W. VISCHER, 1953, bark, Basel (Switzerland); type material; = SAG 26.83; (Vischer 1953)

Protosiphon Klebs

Protosiphon botryoides Klebs

- IB 520 A. PASCHER, mud, Czechoslovakia; = ATCC 30414 = CCAP 731/1A = SAG 731-1a = UTEX 47
IB 521 F. MOEWUS, strain X; = CCAP 731/2 = SAG 731-2

Pseudendocloniopsis Vischer

Pseudendocloniopsis botryoides Vischer

- T 107 H. TRENKWALDER, 1975, soil, Dolomites, South Tyrol (Italy)

Pseudendoclonium Wille

Pseudendoclonium cf. *basiliense* Vischer

- V 209 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Pseudochlorella Lund

Pseudochlorella aquatica Vischer

- BS 39 W. VISCHER, 1955, water pond, Basel (Switzerland); type material; formerly *Jaagia aquatica* Vischer; (Vischer 1955)

Pseudochlorella pyrenoidosa (Zeitler) Lund

- V 212 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Pseudochlorella sp.

- V 214 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)
T 85 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Pseudococcomyxa Korshikov

Pseudococcomyxa cf. *simplex* (Mainx) Fott

- S 46 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia); formerly *Coccomyxa* cf. *simplex* (Mainx)

Pseudopleurococcus Snow emend. Vischer

Pseudopleurococcus arthopyreniae Vischer & Klement

BS 654 O. KLEMENT, 1952, phycobiont of *Arthopyrenia kelpii*; type material; (Vischer 1953)

Raphidonema Lagerheim

Raphidonema longiseta Vischer

BS 97 W. VISCHER, 1933, pond, Botanical Garden Basel (Switzerland); type material; = CCAP 470/1a = SAG 470-1 = UTEX 339; (Vischer 1933)

Scenedesmus Meyen

Scenedesmus obliquus (Turpin) Kützing

BS 8 W. VISCHER, 1923, small pond, Basel, Switzerland, formerly *S. basiliensis*; = ATCC 30434 = CCAP 276/1a = SAG 276-1 = UTEX 83; (Vischer 1926)

Schizothrix Kützing

Schizothrix calcicola (Agardh) Gomont

V 150 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)
S 329 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia); form 1
S 330 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia); form 1
S 332 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia); form 2
S 333 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia); form 2

Schizothrix cf. *heuffleri* Grun.

V 151 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Schizothrix sp.

V 152 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Scotiellopsis Vinatzer

Scotiellopsis rubescens Vinatzer

V 195 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); type material; (Vinatzer 1975, 1975a)

Scotiellopsis terrestris (Reisigl) Puncoch. & Kalina

T 87 H. TRENKWALDER; 1975, soil, pine forest, Brixen, South Tyrol (Italy); formerly *Scotiella terrestris* Reisigl; (Ettl & Gärtner 1995)

Spongiochloris Starr

Spongiochloris excentrica Starr

IB 522 H.C. BOLD, soil, Tennessee (USA); type material; = CCAP 280/1 = SAG 280-1 = UTEX 108; (Starr 1955, Ettl & Gärtner 1995)
S 146 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Spongiochloris gigantea Bischoff & Bold

IB 523 H. BISCHOFF, 1960, soil, Texas (USA); type material; = UTEX 1243; (Bischoff & Bold 1963)

Spongiochloris lamellata Deason & Bold

IB 526 T.R. DEASON, 1958, soil, Texas (USA); type material; = UTEX 977; (Deason & Bold 1960)

Spongiochloris llanoensis Bischoff & Bold

IB 524 H. BISCHOFF, 1960, soil, Texas (USA); type material; = UTEX 1245; (Bischoff & Bold 1963)

Spongiochloris minor Chantanachat & Bold

IB 525 S. CHANTANACHAT, soil, Arizona (USA); type material; = UTEX 1184; (Chantanachat & Bold 1962)

Spongiochloris spongiosa (Vischer) Starr

- BS 318 W. VISCHER, 1942, soil, Unterengadin (Switzerland); type material; formerly *Asterococcus spongiosus* Vischer; = CCAP 3/1 = SAG 280-2b = UTEX 1; (Vischer 1945a)
T 60 H. TRENKWALDER; 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Spongiochloris sp.

- T 61 H. TRENKWALDER; 1975, soil, pine forest, Brixen, South Tyrol (Italy)
S 143 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Spongiococcum Deason

Spongiococcum tetrasporum Deason

- IB 435 T.R. DEASON, soil of a cotton field, Alabama (USA); type material; = UTEX 961; (Bischoff & Bold 1963)

Stichococcus Nägeli

Stichococcus allas Reislgl

- IB 37 H. REISIGL, 1964, soil, Ötztal valley (Austria); type material; (Reislgl 1964)

Stichococcus bacillaris Nägeli

- BS 1 W. VISCHER, 1923, water reservoir, Basel (Switzerland); = CCAP 379/1b = SAG 379-1b = UTEX 314
BS 110 W. VISCHER, 1933, soil, Basel (Switzerland)
BS 331 W. VISCHER, 1942, soil, Unterengadin (Switzerland)
G 42 G. GÄRTNER, 1974, bark, Innsbruck (Austria)
V 162^{*} G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)
S 202 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia), form 1
S 204 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia), form 2
T 100 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy), form 1
T 101 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy), form 2
T 102 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy), form 3

Stichococcus minutus Grintzesco & Peterfi

- G 145 G. GÄRTNER, 1974, bark, Innsbruck (Austria)

Stichococcus undulatus Vinatzer

- V 164 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); type material; (Vinatzer 1975, 1975a)
G 140 G. GÄRTNER, 1974, bark, Innsbruck (Austria)
T 103 H. TRENKWALDER; 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Tetracystis Brown & Bold

Tetracystis aerea Brown & Bold

- IB 322 R.M. BROWN, 1960, strain 1, air, Pampa, Texas (USA); type material; = CCAP 181/1a = SAG 89.90 = UTEX 1452; (Brown & Bold 1964)

Tetracystis aggregata Brown & Bold

- IB 321 R.M. BROWN, 1960, No. Pc-1, air, Austin, Texas (USA); type material; = CCAP 181/2 = SAG 90.80 = UTEX 1454; (Brown & Bold 1964)
V 165 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)
T 54 H. TRENKWALDER, soil, pine forest, Brixen, South Tyrol (Italy)

Tetracystis aptanospora (Arce & Bold) Brown & Bold

- IB 320 G. ARCE, No. 64, soil, Havanna (Cuba); type material; formerly *Chlorococcum aptanosporum* Arce & Bold; = CCAP 181/9 = SAG 91.80 = UTEX 773; (Arce & Bold 1958, Brown & Bold 1964)

Tetracystis illinoisensis Brown & Bold

- IB 317 R.M. BROWN, 1962, No. R-3-3, air, Illinois (USA); type material; = CCAP 181/4 = SAG 93.80 = UTEX 1457; (Brown & Bold 1964)

Tetracystis intermedia (Deason & Bold) Brown & Bold

- IB 314 T.R. DEASON, No. C-1-13, soil, Texas (USA); type material; formerly *Chlorococcum intermedium* Deason & Bold; = CCAP 181/10 = SAG 94.80 = UTEX 974; (Deason & Bold 1960, Brown & Bold 1964)
T 55 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Tetracystis isobilateralis Brown & Bold

- IB 315 R.M. BROWN, 1960, No. A-6-2-3, soil, Texas (USA); type material; = CCAP 181/5 = SAG 95.80 = UTEX 1459; (Brown & Bold 1964)

Tetracystis pampae Brown & Bold

- IB 316 R.M. BROWN, 1961, soil, Texas (USA); type material; = CCAP 181/6 = SAG 96.80 = UTEX 1460; (Brown & Bold 1964)

Tetracystis tetraspora (Arce & Bold) Brown & Bold

- IB 324 G. ARCE, No. 59A, soil, Havanna (Cuba); type material; formerly *Chlorococcum tetrasporum* Arce & Bold; = CCAP 181/11 = SAG 98.80 = UTEX 780; (Arce & Bold 1958, Brown & Bold 1964)

Tetracystis cf. *tetraspora* Brown & Bold

- V 168 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Tetracystis texensis Brown & Bold

- S 229 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Tetracystis sp.

- T 56 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Tolypothrix Kützing

Tolypothrix cf. *byssoides* (Hass.) Kirchn.

- T 1 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Tolypothrix sp.

- V 160 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy)

Trebouxia Puymaly

Trebouxia aggregata (Archibald) Gärtner

- IB 325 A. QUISPEL, 1943, from *Xanthoria* sp., Delft (Netherlands); type material; formerly *Pseudotrebourgia aggregata* Archibald; = CCAP 219/1d = SAG 219-1d = UTEX 180; (Archibald 1975, Gärtner 1985)

Trebouxia anticipata Ahmadjian ex Archibald

- IB 340 V. AHMADJIAN, No. 1, from *Parmelia rufecta* (USA); type material; = CCAP 219/3 = UTEX 903; (Archibald 1975, Gärtner 1985)
IB 341 V. AHMADJIAN, No. 2, from *Parmelia rufecta* (USA); type material; = UTEX 904; (Archibald 1975, Gärtner 1985)

Trebouxia arboricola Puymaly

- IB 363 from Culture Collection Delft (Netherlands); type material; formerly *Cystococcus humicola* Nägeli sensu Trebourg; = CCAP 219/1a

Trebouxia corticola (Archibald) Gärtner

- IB 326 V. AHMADJIAN, 1959, bark (USA); type material; formerly *Pseudotrebourgia corticola* Arch.; = UTEX 909; (Archibald 1975, Gärtner 1985)

Trebouxia crenulata Archibald

- IB 359 RICHARDSON; 1965, from *Xanthoria aureola* (England); type material; = CCAP 219/2; (Archibald 1975)

Trebouxia decolorans Ahmadjian

- IB 327 V. AHMADJIAN, from *Xanthoria parietina* (USA); type material; = UTEX 901; (Ahmadjian 1960, Archibald 1975)

Trebouxia erici Ahmadjian

- IB 342 V. AHMADJIAN, 1960, No. 7, from *Cladonia cristatella* (USA); type material; = UTEX 910; (Ahmadjian 1960)
IB 343 V. AHMADJIAN, 1960, No. 7, from *Cladonia cristatella* (USA); type material; = UTEX 911; (Ahmadjian 1960)
IB 344 V. AHMADJIAN, 1960, No. 1, from *Cladonia cristatella* (USA); type material; = UTEX 912; (Ahmadjian 1960)
IB 364 J. MEISCH, 1981, No. M 025, from *Cladonia grayii*, Innsbruck (Austria)
IB 365 J. MEISCH, 1981, No. M 027, from *Cladonia subulata* (Luxembourg)

Trebouxia excentrica Archibald

- IB 345 H. HUTCHINSON, 536, from *Stereocaulon dactylophyllum* var. *occidentale* (USA); type material; = UTEX 1714; (Archibald 1975)

Trebouxia flava Archibald

- IB 346 A. QUISPTEL, from *Physcia pulverulenta* (Netherlands); type material; = CCAP 219/1c = UTEX 181; (Archibald 1975)

Trebouxia galapagensis (Hildreth & Ahmadjian) Gärtner

- IB 333 E. KEOGH, 1971, from *Ramalina* sp. (Galapagos Islands); type material; = UTEX 2230; (Hildreth & Ahmadjian 1981, Gärtner 1985)

Trebouxia gelatinosa Ahmadjian ex Archibald

- IB 347 V. AHMADJIAN, 1959, No. 2, from *Parmelia caperata* (USA), type material; = UTEX 905; (Archibald 1975)
IB 348 V. AHMADJIAN, 1959, No. 3, from *Parmelia caperata* (USA); type material; = UTEX 906; (Archibald 1975)
IB 366 J. MEISCH, 1981, No. M 035, from *Hypogymnia physodes*, Innsbruck (Austria)

Trebouxia gigantea (Hildreth & Ahmadjian) Gärtner

- IB 334 R.E. SHOWMAN, 1971, from *Caloplaca cerina*, Ohio (USA); type material; formerly *Pseudotrebourgia gigantea* Hildreth & Ahmadjian; = UTEX 2231; (Hildreth & Ahmadjian 1981, Gärtner 1985)

Trebouxia glomerata (Warén) Ahmadjian

- IB 349 V. AHMADJIAN, 1960, No. 1, from *Stereocaulon evolutoides*, Princeton, Massachusetts (USA); type material; = UTEX 894; (Ahmadjian 1960)
IB 350 V. AHMADJIAN, 1960, No. 2, from *Stereocaulon evolutoides*, Princeton, Massachusetts (USA); type material = UTEX 895; (Ahmadjian 1960)
IB 351 V. AHMADJIAN, 1960, No. 1, from *Stereocaulon pileatum*, Princeton, Massachusetts (USA); type material; = UTEX 896; (Ahmadjian 1960)
IB 352 V. AHMADJIAN, 1960, No. 8, from *Stereocaulon pileatum*, Princeton, Massachusetts (USA); type material; = UTEX 897; (Ahmadjian 1960)

Trebouxia higginsiae (Hildreth & Ahmadjian) Gärtner

- IB 335 E. KEOGH, 1971, from *Buellia straminea*, Bartolome (Galapagos Islands); type material; formerly *Pseudotrebourgia higginsiae* Hildreth & Ahmadjian; = UTEX 2232; (Hildreth & Ahmadjian 1981, Gärtner 1985)

Trebouxia impressa Ahmadjian

- IB 330 V. AHMADJIAN, 1960, from *Physcia stellaris* (USA); type material; formerly *Pseudotrebourgia impressa* (Ahmadjian) Archibald; = UTEX 892; (Ahmadjian 1960, Archibald 1975)
IB 331 V. AHMADJIAN, 1960, from *Physcia stellaris* (USA); type material; formerly *Pseudotrebourgia impressa* (Ahmadjian) Archibald; = UTEX 893; (Ahmadjian 1960, Archibald 1975)

Trebouxia incrustata Ahmadjian ex Gärtner

- IB 329 V. AHMADJIAN, 1959, from *Lecanora dispersa* (USA); type material; formerly *Pseudotre-
bouxia incrustata* (Ahmadjian) Archibald; = UTEX 784; (Archibald 1975, Gärtner-1985)

Trebouxia irregularis Hildreth & Ahmadjian

- IB 339 V. AHMADJIAN, 1972, from *Stereocaulon* sp., Langa River (Iceland); type material; = UTEX
2236; (Hildreth & Ahmadjian 1981)

Trebouxia italiana Archibald

- IB 358 TOMASELLI; from *Xanthoria parietina* (Italy); type material; formerly *Trebouxia decolorans*
Ahmadjian; = CCAP 219/5b; (Archibald 1975)

Trebouxia jamesii (Hildreth & Ahmadjian) Gärtner

- IB 336 E. KEOGH, 1975, from *Schaereria tenebrosa*, Wales (England); type material; formerly *Pseudo-
trebouxia jamesii* Hildreth & Ahmadjian; = UTEX 2233; (Hildreth & Ahmadjian 1981, Gärt-
ner 1985)

Trebouxia magna Archibald

- IB 354 V. AHMADJIAN, No. 2, from *Pilophorus acicularis* (USA); type material; = UTEX 902;
(Archibald 1975)

Trebouxia potteri Ahmadjian ex Gärtner

- IB 332 V. AHMADJIAN, from *Lecanora rubina* (USA); type material; formerly *Pseudotrebouxia*
potteri (Ahmadjian) Archibald; = UTEX 900; (Archibald 1975, Gärtner 1985)

Trebouxia pyriformis Archibald

- IB 355 H. HUTCHINSON, from *Cladonia squamosa* (USA); type material; = UTEX 1712; (Archi-
bald 1975)

- IB 356 H. HUTCHINSON, from *Stereocaulon pileatum* (USA); type material; = UTEX 1713; (Archi-
bald 1975)

Trebouxia showmanii (Hildreth & Ahmadjian) Gärtner

- IB 337 E. SHOWMAN, 1971, from *Lecanora hagenii*, Ohio (USA); type material; formerly *Pseudo-
trebouxia showmanii* Hildreth & Ahmadjian; = UTEX 2234; (Hildreth & Ahmadjian 1981,
Gärtner 1985)

Trebouxia simplex Tschermak-Woess

- IB 361 E. TSCHERMAK-WOESS, 1976, from *Chaenotheca chrysocephala*, Tyrol (Austria); type
material; = SAG 101.80; (Tschermak-Woess 1978)

Trebouxia usneae (Hildreth & Ahmadjian) Gärtner

- IB 338 E. KEOGH, 1975, from *Usnea filipendula*, Maine (USA); type material; formerly *Pseudotre-
bouxia usneae* Hildreth & Ahmadjian; = UTEX 2235; (Hildreth & Ahmadjian 1981, Gärtner
1985)

Trochiscia Kützing

Trochiscia sp.

- S 236 K. SCHWARZ, 1975, soil, Isle of Lavsa (Jugoslavia)

Trochisciopsis Vinatzer

Trochisciopsis tetraspora Vinatzer

- V 208 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); type material; (Vinatzer 1975,
1975a)

- T 77 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Ulothrix Kützing

Ulothrix tenuissima Kützing

- T 93 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Vischeria Pascher

Vischeria helvetica (Vischer & Pascher) Hibberd

- BS 170 R. CHODAT, Genf, No. 255; formerly *Polyedriella helvetica* Vischer & Pascher; = ATCC 30425 = CCAP 861/1 = SAG 876-1 = UTEX 49; (Hibberd 1981)

Vischeria punctata Vischer

- BS 266 W. VISCHER, 1941, soil, Unterengadin (Switzerland); type material; = ATCC 30441 = CCAP 887/1 = SAG 887-1 = UTEX 153; (Vischer 1945, Hibberd 1981)
T 10 H. TRENKWALDER, 1975, soil, pine forest, Brixen, South Tyrol (Italy)

Vischeria stellata (R. Chodat ex Poulton) Pascher

- BS 169 R. CHODAT, No. 185; = CCAP 887/2b = SAG 887-2 = UTEX 312; (Hibberd 1981)

Xanthonema Silva

Xanthonema hormidioides (Vischer) Silva

- BS 358 W. VISCHER, 1943, soil, Unterengadin (Switzerland); type material; formerly *Heterothrix hormidioides* Vischer; = CCAP 836/2 = UTEX 353; (Vischer 1945, Ettl & Gärtner 1995)

Xanthonema sessile (Vinatzer) Ettl & Gärtner

- V 98 G. VINATZER, 1975, soil, Dolomites, South Tyrol (Italy); type material; formerly *Heterothrix sessilis* Vinatzer; (Vinatzer 1975, 1975a, Ettl & Gärtner 1995)

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