

ANTITHAMNION Nägeli (1847, p. 200; type: *A. cruciatum*)

Synonyms Callithamnion subgen. Antithamnion (Nägeli) Farlow (1881, p. 122)
Callithamnion sect. Antithamnion (Nägeli) Ardissonne (1883, p. 176)

Antithamnion subgen. **Pteroton** Athanasiadis (1996, p. 142; type: *A. biarmatum*)

Synonym Antithamnion sect. Repentes J. Agardh (1892, p. 20; type: not designated)

Antithamnion adenocladellum R. Norris (1987, p. 32, figs 28, 29)

Type locality Palm Beach, near Port Edward, Natal, South Africa

Holotype NAT 3435 (NU-009328)

Distribution endemic

Antithamnion aglandum Kim et Lee in Kim & Chah (1996, p. 204)

Type locality Cheju Island, Korea

Holotype SNU 9003241

Distribution endemic

Note earlier studied in culture by Lee & West (1980, topotype material, as *A. nipponicum*) (Kim & Chah 1996, p. 211)

Antithamnion amphigeneum Millar (1990, p. 386, figs 38, 39)

Type locality Muttonbird Island, Coffs Harbour, N.S.W., Australia

Holotype MELU AM847

Synonym Antithamnion algeriense Verlaque et Seridi [1991, p. 155, figs 1-10; type locality: Bordj-El-Kiffan (Algiers beach), Algeria; holotype: PC (F. 1306)]

Distribution eastern Australia and apparently **introduced** to the western Mediterranean and the European Atlantic coast (Secilla & al. 1997)

Antithamnion armatum (J. Agardh) De Toni (1903, p. 1398)

Basionym Callithamnion armatum J. Agardh (1885, p. 3)

Type locality "Nova Hollandiae"

Lectotype LD (Agardh 18041)

Distribution Western and South Australia

Antithamnion biarmatum Athanasiadis (1996, p. 144, fig. 64)

Type locality Bicheno, Split Rock, Tasmania, Australia

Holotype GB (unnumbered: Athanas. '...18 Dec. 1992..')

Distribution Tasmania and Victoria, Australia

Antithamnion callocladum Itono (1971, p. 209, figs 1, 2, 'calloclados')

Type locality Biroujima near Sata-misaki, Oosumi Peninsula, Kyushu, South Japan

Type KAG 19711

Distribution endemic

Antithamnion hubbsii Dawson (1962, p. 16, pl. 5, fig. 2; pl. 6, fig. 3)

Type locality Melpomene Cove, Isla Guadalupe, Baja California, Mexico

Holotype LAM 500043

Misapplied names *A. pectinatum* (Montagne) Brauner, *A. nipponicum* Yamada et Inagaki (= *A. pectinatum*)

Distribution eastern Australia, SE Africa, Baja California, Korea (Kim & Chah 1996, as *A. nipponicum*), Japan (Yoron I., Oodomari, Mage I.; Itono 1969; Kobe, Hachinobe; Cho & al. 2006, as *A. nipponicum*), North Carolina (Cho & al. 2006, as *A. nipponicum*), W. Norway (Rueness & al. 2007, as *A. nipponicum*), Atlantic Spain (Secilla & al. 2007, as *A. nipponicum*), Mediterranean, the Azores and Connecticut (Cho & al. 2006, as *A. nipponicum*; Athanasiadis & Tittley 1994, as *A. pectinatum*).

Annotated checklist of species of *Antithamnion* Nägeli with key to sections and references

Note reproductive structures described in specimens from California, Japan (Kobe and Hachinohe) and North Carolina (Cho & al. 2006, figs 2-41, as *A. nipponicum*); the species **introduced** to the North Atlantic and the Mediterranean. *Antithamnion hubbsii* differs from *A. pectinatum* mainly in producing new axes exclusively from periaxial cells (in *A. pectinatum* new axes replace a whorl-branch in a pair). The character needs to be determined near the top of young thalli, because development of new axes from periaxial cells occurs secondarily in all species of the genus.

Antithamnion okiense Kajimura (1987, p. 178, figs 7-19, 22, 23)

Type locality Tsudo, Oki Islands, Japan

Lectotype TNS AL-37401 (OS 9938) (Kajimura 1989, p. 153, figs 3,4)

Distribution endemic

Antithamnion pectinatum (Montagne) Brauner in Athanasiadis et Tittley (1994, p. 79)

Basionym *Callithamnion pectinatum* Montagne (1842, p. 9)

Type locality Auckland Island, N. Zealand

Holotype PC (Montagne, unnumbered, 'Callithamnion pectinatum Mtg Auckland illustr. d'Urville')

Synonyms *Herpothamnion pectinatum* (Montagne) Nägeli (1862, p. 413)

Callithamnion applicitum Harvey [1855b, p. 258; type locality: not specified, New Zealand; lectotype: TCD (Harvey unnumbered, no location, coll. 'Colenso')]

Antithamnion applicitum (Harvey) J. Agardh (1892, p. 21, 1896, index p. 1)

Antithamnion nipponicum Yamada et Inagaki (1935, p. 38, figs 1-3; syntype localities: Natudomari-zaki, Mut(s)u Bay; Osyoro, Siribesi Prov., Japan; lectotype: orig.illustr. fig. 1, design. in Athanasiadis (2009); epitype: SAP 08203, undated, Ooshima, Mutsu Bay, leg. Y. Yamada, design. in Athanasiadis (2009, figs 4-12)]

? *Antithamnion cristirhizophorum* Tokida et Inaba (1950, p. 121, figs 3 a-d,4; type locality: Shirahama, Boshu Prov., Japan; type: Inaba No 350, Herbarium, Dept Fish., Hokkaido Univ.)

Distribution New Zealand, southern Australia (Tasmania and Victoria), Japan (epitype of *A. nipponicum*).

Notes [1] Atlantic and Mediterranean records of *A. nipponicum* or *A. pectinatum* apparently belong to *A. hubbsii* (cf. Cho & al. 2006; Athanasiadis 2009). 'the combination *Antithamnion pectinatum* .. was originally proposed by Brauner in 1977 in his unpublished Thesis, and clearly annotated by him on herbarium collections of this species in BM under the cover of *Callithamnion applicitum* Harvey.' examined by Athanasiadis & Tittley (1994, p. 79). Hence the combination was attributed to Brauner as he 'contributed in some way' (Art. 46.2)

[2] The type material of *Callithamnion applicitum* Harvey (1855b) was apparently collected by Rev. W. Colenso, whose name is annotated on one of the four sheets in TCD - 'Colenso' being previously considered as the type locality (Athanasiadis 1996).

Antithamnion pinnatifolium Wollaston (1968, p. 289, fig. 17 H-N)

Type locality Stanley Beach, Kangaroo Island, South Australia

Holotype AD A29504

Distribution Western and southern Australia

Antithamnion pterocladellum R. Norris (1987, p. 30, figs 22, 25-27)

Type locality Lander's Green Coral Reef, Park Rynie, Natal, South Africa

Holotype NAT 2380 (NU-009329)

Distribution endemic

Antithamnion verticale (Harvey) J. Agardh (1892, p. 20; 1896, index p. 1)

Basionym *Callithamnion verticale* Harvey (1855, p. 561)

Type locality Garden Island, Western Australia

Type TCD (Harvey No 267)

Synonyms *Callithamnion horizontale* Harvey [1855, p. 560; type locality: Garden Island, Western Australia; type: in TCD (Harvey No 254)]

Callithamnion dimorphum Harvey (1863, pp. liv, nomen novum for *A. horizontale* and *A. verticale*)

Antithamnion horizontale (Harvey) J. Agardh (1892, p. 20; 1896, index p. 1)

Distribution Western and southern Australia

Antithamnion subgen. **Antithamnion** sect. **Enallassomena** Athanasiadis (1996, p. 149; type: *A. decipiens*)

Antithamnion amamiense Itono (1977, pp. 18, 71, 189, 227, 247; figs 4 F, 33 F, G, 49 B, 54 C, D, 'amamiensis')

Type locality Yoronjima, Amami Islands, China Sea, South Japan

Holotype KAG (HI19754)

Distribution endemic (Mageshima, Biroujima and Sakurajima in S. Japan)

Antithamnion antillanum Børgesen (1917, p. 226, figs 213-216), nom. cons.

Type locality St. Thomas, Virgin Islands, Caribbean Sea, USA

Lectotype C (Børgesen No 56)

Synonyms *Antithamnion* *Iherminieri* var. *antillanum* (Børgesen) Nasr (1941, p. 68)

Callithamnion *Iherminieri* Maze et Schramm [1878, p. 14; type locality: Guadeloupe (France), Caribbean Sea; holotype: PC (Crouan No 1259)]

Antithamnion *Iherminieri* (Maze et Schramm) Nasr (1941, p. 66, figs 9-10)

Antithamnion *palmyrense* Dawson [1959, p. 44, fig. 21 E; type locality: Palmyra Atoll (USA), Line Islands; holotype: UC (Dawson No 19448)]

? *Antithamnion* *echigoense* Noda (1972, p. 6, fig. 6; type locality: Shiiya-misaki near Kashiwazaki, Japan Sea; holotype: Noda No 2230, herbarium unspecified)

Distribution Caribbean Sea, Brazil, SE Africa, Red Sea, Seychelles, southern Mozambique, South Japan, Philippines, South Great Barrier Reef, Line Islands, Hawaiian Islands, Baja and Gulf of California

Antithamnion compactum (Grunow) Schiffner in Schiffner et Biebl (1944, p. 110)

Basionym *Sporacanthus compactus* Grunow (1867, p. 60, table VI, fig. 3 a, b)

Type locality Gibraltar **Lectotype** HBG (unnumbered: Grunow '...Gibraltar, Novara Expedition')

Synonyms *Antithamnion* *diminutum* var. *polyglandulum* Stegenga [1986, p. 30, pl. 5, fig. 1; type locality: Swartklip, False Bay, Cape Province, South Africa; holotype: BOL (Stegenga No 700)]

Antithamnion *eliseae* R. Norris [1987, p. 21, figs 6-10; type locality: Palm Beach, near Port Edward, Natal, South Africa; holotype: NAT 3471 (NU09125)]

Distribution Gibraltar and South Africa

Antithamnion decipiens (J. Agardh) Athanasiadis (1996, p. 151)

Basionym *Callithamnion decipiens* J. Agardh (1842, p. 70)

Type locality Nice, Mediterranean France

Lectotype LD (Agardh No 18794)

Synonyms *Callithamnion cruciatum* var. *decipiens* (J. Agardh) Kützing (1849, p. 649)

Callithamnion fragilissimum Zanardini [1860, p. 11, table III, B; type locality: Dalmatia (Croatia), Adriatic Sea; holotype: in Museo Civico Storia Naturale of Venice]

Antithamnion cruciatum f. *fragilissimum* (Zanardini) Hauck (1882, p. 71)

Antithamnion fragilissimum (Zanardini) De Toni (1903, p. 1408)

Antithamnion ogdeniae Abbott [1979, p. 218, figs 11-14; type locality: Virgin Islands, USA; holotype: US-4031 (slide US-8592)]

Misapplied names *Antithamnion antillanum* sensu Børgesen (1930, p. 51, figs 19, 20; Canarian & Mediterranean specimens, see Athanasiadis 1985, p. 458; 1985b, p. 387; 1996)

Antithamnion antillanum sensu Schiffner (1931, p. 163; see Athanasiadis 1985b, p. 387; 1996)

Antithamnion cruciatum sensu Nägeli (1847, p. 200, table VI, figs 1-6; see Athanasiadis 1985b, p. 387; 1996)

Distribution Caribbean Sea (including Atlantic Colombia, Florida Keys, Virgin Islands and Belize), Azores, Canaries, Mauritania, Mediterranean to the North Aegean

Antithamnion delicatulum (Harvey) De Toni (1903, p. 1415)

Basionym *Callithamnion delicatulum* Harvey (1855, p. 560)

Type locality King George's Sound, Western Australia

Neotype TCD (Harvey No 529)

Synonyms *Callithamnion divergens* J. Agardh [1876, p. 19; type locality: Georgetown, Tasmania; lectotype: LD (Agardh No 18804)]

Annotated checklist of species of *Antithamnion* Nägeli with key to sections and references

Antithamnion divergens (J. Agardh) J. Agardh (1892, p. 21; 1896, index p. 1)

Distribution Western Australia, Victoria, Tasmania and South Africa

Antithamnion diminuatum Wollaston (1968, p. 293, fig. 18 K-N)

Type locality Middle River, Kangaroo Island, South Australia

Holotype AD A13031

Distribution Western Australia to eastern Australia, SE Africa and Azores

Antithamnion gracilentum (Harvey) J. Agardh (1892, p. 21; 1896, index p. 1)

Basionym *Callithamnion gracilentum* Harvey (1855, p. 560)

Type locality Rottneest Island, Western Australia

Holotype TCD (Harvey No 327)

Distribution Western Australia, Victoria and Tasmania

Antithamnion hanovioides (Sonder) De Toni (1903, p. 1398)

Basionym *Callithamnion hanovioides* Sonder (1853, p. 674)

Type locality St. Vincent's Gulf, South Australia

Lectotype MEL (Sonder's original drawings 'No 43, P. Adelaide')

Distribution Western Australia, Tasmania and N.S.W.

Antithamnion makroklonion Athanasiadis, Garbary et Vandermeulen (1990, p. 560, figs 1-8, 9 A-C)

Type locality North Beach, Elat, Red Sea, Sinai Peninsula, Israel

Holotype BM (unnumbered: Athanas. '...Elat 28.xi.86...')

Distribution Red Sea, (?) South Africa, (?) Puerto Rico (unpubl.data), and eastern Australia (Vistari Reef and Lord Howe Island)

Antithamnion piliferum Cormaci et Furnari (1987, p. 225, figs 1-9)

Type locality Capo Passero, Sicily, Italy

Holotype CAT 490

Distribution endemic [Ionian Sea (Sicily and Kephallinia Island) and Ligurian coast]

Antithamnion subgen. ***Antithamnion*** sect. ***Pedicellata*** Athanasiadis (1996, p 156; type: *A. tenuissimum*)

Antithamnion dendroideum G. M. Smith et Hollenberg (1943, p. 217, figs, p. 20-21)

Type locality Shale reef off Del Monte, Monterey, California, USA

Lectotype UC (G. M. Smith No 41-525, DS 306386)

Distribution California and eastern Australia (Port Kembla, N.S.W.)

Antithamnion densum (Suhr) Howe (1914, p. 151)

Basionym *Callithamnion densum* Suhr (1840, p. 281)

Type locality Peru

Holotype MEL 692189

Synonyms *Callithamnion leptocladum* Montagne [1842, p. 9; type locality: Strait of Magellan, Chile; lectotype: PC (Montagne, unnumbered)]

Herpothamnion leptocladum (Montagne) Nägeli (1862: 413)

Antithamnion defectum Kylin [1925, p. 46, fig. 27; type locality: Friday Harbor, Canoe Island, USA; lectotype: LD (Kylin unnumbered)]

Antithamnion setaceum Gardner [1927a, p. 373-374, pls 73-74; type locality: Ocean Beach, San Diego County, California, USA; lectotype: UC 296619 (Gardner No 3534)]

Antithamnion pygmaeum Gardner [1927b, p. 413, pls 91-93; type locality: La Jolla, California, USA; lectotype: UC 296663 (Gardner No 5090)]

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Antithamnion sparsum Tokida [1932, p. 105, figs 1,2, pl. a; type locality: Lake Tobuchi (lagoon), Saghalien, Japan; holotype: Tokida No 423 (herbarium unspecified)]

Antithamnion leptocladum (Montagne) Wynne (1986, p. 316)

Distribution Peru, Chile (Tocopilla and Strait of Magellan), Baja California to Prince William Sound (Alaska), Russian coast of Japan Sea, Japan, Korea, South Africa, Tristan da Cunha, Patagonia, western Africa (Namibia), Brest and west coast of Ireland; in NW America first recorded in 1924; in NE Atlantic first recorded from Brest in 1964

Note Lee & al. (2005) observed genotypic differences in allopatric isolates and proposed the recognition of sibling species (*A. sparsum*, *A. defectum*, *A. densum*)

Antithamnion erucacladellum R. Norris in Abbott & Norris (1993, p. 455, figs 12-16)

Type locality Lanikai, Kailua Bay, Oahu Island, Hawaii

Holotype HMA 746 (BISH 622104)

Distribution endemic

Note closely related to *A. uniramsum* from South Australia

Antithamnion heterocladum Funk (1955, p. 111, textfigs 9-11, table XXI, figs 1-6)

Type locality Napoli, Italy

Type not designated

Distribution Mediterranean Sea (the earliest record by Reinke in 1880), Scilly Isles and Azores

Antithamnion kyllinii Gardner (1927b, p. 411, pl. 89, fig. 1)

Type locality Victoria, Vancouver Island, Canada

Lectotype UC 284038 (Gardner No 3904)

Synonyms *Antithamnion secundatum* Gardner [1927b, p. 413-414; type locality: San Diego, California, USA; holotype: UC 296617 (Gardner N3525)] *Antithamnion nematocladellum* R. Norris [1987, p. 26, figs 11,12,15; type locality: 9 Mile Reef, Sodwana, Natal, South Africa; holotype: NU-009327 (R. Norris No 34744)]

Distribution South Africa, Korea, southern British Columbia to Pacific Mexico, Galapagos and Peru

Antithamnion pseudoarmatum Stegenga (1986, p. 32, pl. 5 figs 2, 3)

Type locality Olifantsbos, South Africa

Holotype BOL (Stegenga No 464)

Distribution endemic

Antithamnion secundum Itono (1971, p. 212, fig. 4)

Type locality Nishinoomote, Tanegashima, South Japan

Holotype Itono No 19713 (herb. not specified)

Distribution South Japan, South Africa

Note recorded from Namibia (Rull & Gomez Garreta 2002), but based on the widely distributed *A. densum*, as thalli lack abaxial 2nd order branchlets borne proximally on whorl-branches and have new axes borne singly and gland cells on 2-celled branchlets (Athanasiadis 2016, p. 877, collection BCF-A 11992, re-examined in Sept. 2006)

Antithamnion tenuissimum Schiffner (1915, p. 140)

Type locality Rovinj, Istria, Croatia, North Adriatic

Lectotype L (Lugd. Bat. No 939.194.1056)

Distribution Mediterranean Sea

Note The name *Antithamnion tenuissimum* Schiffner was first published in the records of the 'Versammlung der Sektion für Botanik' Wien University (Schiffner l.c.). Schiffner provided a reference to Hauck's '*A. cladoderium*' (i.e. *Callithamnion cladoderium* sensu Hauck 1878: 185-7, pl.2, figs 1-3, 9), which Hauck later described as *A. cruciatum* var. *tenuissima* Hauck (1882: 71). Schiffner later proposed the combination *Antithamnion tenuissimum* (Hauck) Schiffner (1916: 140), but his earlier publication is a valid act of recognition of a new species and hence the name *A. tenuissimum* dates from 1915 and is to be ascribed solely to Schiffner – as a new name/status of *Callithamnion cladoderium* sensu Hauck (1878: 185-7, pl.2, figs 1-3, 9). *Antithamnion tenuissimum* Schiffner and *Antithamnion cruciatum* f. *tenuissima* Hauck have the same (lecto)type (Athanasiadis 2016, p. 878).

Antithamnion uniramum Athanasiadis (1996, p. 157, fig. 74)

Type locality Arno Bay, South Australia

Holotype GB (unnumbered: Athanas. '...Sept. 1971')

Distribution endemic

Note closely related to *A. erucacladellum* from Hawaii

Antithamnion villosum (Kützinger) Athanasiadis in Maggs et Hommersand (1993, p. 10)

Basionym *Callithamnion cruciatum* var. *villosum* Kützinger (1861, p. 28, tab 87 II)

Type locality Calvados, Atlantic France

Holotype L (Lugd. Bat. No 939.194...1186)

Synonym *Antithamnion cruciatum* var. *scandinavicum* Athanasiadis [1986, p. 707, figs 7-13; type locality: Island Mors, Limfjorden, Denmark; holotype: C (Christensen No 10061)]

Distribution Morocco (Agadir), Portugal (Albufeira and Praia da Rocha), Atlantic France (Brest, Brittany, Calvados), Irish Sea to southern British Isles and southern Scandinavia (Denmark and Swedish west coast), North Carolina and Brazil

Antithamnion subgen. **Antithamnion** sect. **Antithamnion** (type: *A. cruciatum*)

Antithamnion cruciatum (C. Agardh) Nägeli (1847, p. 200, excl. text and figs)

Basionym *Callithamnion cruciatum* C. Agardh (1827, p. 637)

Type locality Trieste, Italy, North Adriatic Sea

Lectotype LD (Agardh No 18774)

Synonyms *Callithamnion naccarianum* Rudolphi in Naccari [1828, p. 56, fig. 1; 1828b: 32; type locality: Venice, Italy; holotype: M (Reinbold No 1915)]

Callithamnion pumilum Harvey in W. J. Hooker [1833, p. 339; type locality: Milltown Malbay, Ireland; lectotype: BM (Harvey unnumbered)]

Callithamnion imbricatum Schousboe ex Suhr (1840, p. 290; type locality: Tangier, Morocco; lectotype: MEL 692195)

Callithamnion dubium Zanardini [1840, p. 205 (repr. 13); type locality: Venice, Italy; type: not designated]

Callithamnion cruciatum var. *radicans* J. Agardh [1841, p. 44; type locality: Koster Islands, Swedish west coast; lectotype: LD (Agardh No 18737)]

Callithamnion abbreviatum Kützinger [1843, p. 373; type locality: Genoa, Italy; lectotype: L (Lugd. Bat. No 941.313.603)]

Callithamnion cruciatum var. *dubium* (Zanardini) Zanardini (1847, p. 225)

Callithamnion cruciatum var. *pumilum* (Harvey) Harvey (1841, p. 104)

Herpothamnion abbreviatum (Kützinger) Nägeli (1862, p. 411)

Antithamnion imbricatum (Schousboe ex Suhr) Nägeli (1862, p. 413)

Antithamnion pumilum (Harvey) Nägeli (1862, p. 414)

Antithamnion cruciatum var. *pumilum* (Harvey) Reinke (1891, p. 273)

Antithamnion cruciatum var. *radicans* (J. Agardh) Collins (1899, p. 125)

Antithamnion cruciatum var. *comosum* Schiffner [1926, p. 298; type locality: Napoli, Italy; type: BM (Schiffner No 89)]

Antithamnion cruciatum var. *comosum* f. *moniliata* Schiffner [1926, p. 298; type locality: Istria, Capodistria, Croatia, North Adriatic Sea; type: BM (Schiffner No 90)]

Antithamnion cruciatum var. *profundum* Feldmann-Mazoyer (1941, p. 258, fig. 94; type locality: not specified (probably Mediterranean France); type: not designated)

Distribution Mediterranean Sea, Black Sea, Canary Isles, Bermudas, Atlantic Europe to Oslo Fjord (a record from Bergen, western Norway, being potentially representative of this species or *A. villosum*), North Carolina to Newfoundland and recently **introduced** to Southern Australia (Wollaston & Womersley 1998, p. 117)

KEY TO SUBGENERA & SECTIONS

1. Thallus ramification more or less bilateral (distichous).....subgen. *Pteroton*
1. Thallus ramification with whorl-branches decussately arranged turning their flat side towards the bearing axis.....subgen. *Antithamnion* (2)
2. Whorl-branches ramified in distichous-alternate pattern.....sect. *Enallassomena*
2. Whorl-branches ramified adaxially.....sect. *Pedicellata*
2. Whorl-branches ramified in irregular pattern.....sect. *Cruciatum*

EXCLUDED SPECIES

adnatum J. Agardh (*Antithamnionella*)
alternans Gardner (*Antithamnionella*; non *Aa alternans* Ricker)
americanum Harvey (*Scagelia*)
antarcticum Kylin (*Pterothamnion*)
asymmetricum Gardner (*Antithamnionella*)
atlanticum Oliveira Filho (*Antithamnionella*)
australe (J. Agardh) De Toni (*Wrangelia*)
barbatum (C. Agardh) Holmes et Batters (*Spermothamnion*)
basisporum Tokida et Inaba (*Antithamnionella*)
baylesiae Gardner (*Hollenbergia*)
boreale (Gobi) Kjellman (*Scagelothamnion*)
breviramosum Dawson (*Antithamnionella*)
butleriae Collins (*Acrothamnion*)
cladodermum (Zanardini) Hauck (*Balliella*)
confusum (J. Agardh) Laing (*Pterothamnion*)
corallinum (Ruprecht) Nägeli (*Scagelia*)
corticatum Tokida (*Tokidaea*)
crispum (Ducluzeau) Thuret (*Pterothamnion*)
cristatum (Kützinger) Schiffner (*Sporacanthus* = *Antithamnionella* ?)
crouanioides Itono (*Balliella*)
densiusculum Gardner (*Antithamnionella*)
dispar (Harvey) J. Agardh (*Perithamnion*)
dumonti Dawson (*Wrangelia*)
elegans Berthold (*Antithamnionella*)
flaccidum (J. D. Hooker et Harvey) De Toni (*Mediothamnion*)
flagellatum Børgesen (*Antithamnionella*)
floccosum (O. F. Müller) Kleen (*Antithamnionella*)
gardneri G. De Toni (*Antithamnionella*)
gardneri Tokida (*Antithamnionella*)
glanduliferum Kylin (*Antithamnionella*)
graeffei (Grunow) De Toni (*Antithamnionella*)
hannafordi (Harvey) J. Agardh (*Ptilota* ?)
interruptum (Smith) J. E. Gray (*Seirospora*)
lindaueri G. Feldmann (*Pterothamnion*)
microptilum (Grunow) De Toni (*Dasyptilon*)
miharae Tokida (*Antithamnionella*)
minutissimum Levring (*Pterothamnion*)
mucronatum (J. Agardh) Nägeli (*Macrothamnion*)
myurum (Suhr) Schiffner (*Tetrathamnion*)
nigrescens J. Agardh (*Gymnothamnion*)
nigricans Gardner (*Hollenbergia*)
nodiferum (J. Agardh) De Toni (*Pterothamnion*)
occidentale Kylin (*Scagelia*)
orbignianum (Montagne) De Toni (*Pterothamnion*)
pacificum (Harvey) Kylin (*Antithamnionella*)
percurrens Dawson (*Perikladosporon*)
plumula (Ellis) Thuret (*Pterothamnion*)
preissi (Sonder) De Toni (*Acrothamnion*)
pseudocorticatum Dawson (*Balliella*)

pteroton Bornet (*Gymnothamnion*)
ptilota (J. D. Hooker et Harvey) Harvey-Gibson (*Dasyptilon*)
pulchellum Gardner (*Acrothamnion*)
pusillum (Ruprecht) Kjellman (*Scagelothamnion*)
pylaisaei (Montagne) Kjellman (*Scagelia*)
ramulosum (Reinsch) Kylin (*Pterothamnion*)
sarniense (Lyle) Feldmann-Mazoyer (*Antithamnionella*)
sarniensis Lyle (*Antithamnionella*)
scrippsianum Dawson (*Antithamnionella*)
shimamuranum Nagai (*Antithamnionella*)
simile (J. D. Hooker et Harvey) De Toni (*Pterothamnion*)
simulans Gardner (*Scagelia*)
spirographidis Schiffner (*Antithamnionella*)
subcorticatum Itono (*Balliella*)
sublittorale Setchell et Gardner (*Antithamnionella*)
subulatum (Harvey) J. Agardh (*Hollenbergia*)
tanakae Itono (*Grallatoria*)
tenuissimum Gardner (*Antithamnionella*)
terminale Inagaki (*Acrothamnion*)
ternatum Joly et Cordeiro (*Antithamnionella*)
ternifolium (J. D. Hooker et Harvey) De Toni (*Antithamnionella*)
ternirameum Hamel et Hamel-Joukov, nomen nudum (?)
thouarsii (Montagne) De Toni (*Medeiothamnion*)
tristicum Joly et Yamaguishi (*Antithamnionella*)
uncinatum Gardner (*Antithamnionella*)
veleroae Taylor (*Antithamnionella*)
verticillatum (Suhr) De Toni (*Antithamnionella*)

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Annotated checklist of species of *Antithamnion* Nägeli with key to sections and references

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