

LIST OF SPECIES
OF
THE LITHOTHAMNIA

BY

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Lithothamnia *Calcareous Algae*

Descriptions of new species and varieties

Notes on the fossil species

Notes on the recent species

Notes on the fossil genera

Notes on the recent genera

Notes on the fossil species

Notes on the recent species

In a preceding paper I published a preliminary survey of the Lithothamnia and stated my intention later to give a supplementary list of the species connected with the types there quoted. However, for various reasons I have thought it desirable already now to publish such a list, although some original specimens are still wanting and the limits of some of the species are not yet fully known. Therefore, the list does not pretend being perfect as regards the nomenclature, nor is it always to be decided with any degree of certainty whether some of the species quoted are to be referred to the one or the other genus. Nevertheless I have not in every case put a sign of interrogation to species not yet examined, setting aside such ones, only known in a steril or not well developed stage, as well as several of the fossil species, whose place, at least in some cases, will perhaps for ever be more or less doubtful. Still I have here included several species, which most probably will prove to be reduced as synomyms or forms of other species, formerly described. This applies not only to recent species but no doubt to some of the fossil ones. I know at present 8 species which are met with both in fossil strata as well as recent, but this number will not unlikely increase, as soon as a more thorough comparison of fossil and recent species takes place. On the other hand I have excluded a few species, either known to belong to formerly described species or so uncertain that we can have no opinion of what they may be.

Some new species or forms named and marked with an asterisk (*) will be described in a following paper.

Gen. **Archæolithothamnion** (Rothpl.) Fosl.

Sect. I. Endosporæ Fosl.

1. A. cenomanicum (Rothpl.) Fosl. mscr.
2. A. turonicum (Rothpl.) Fosl. mscr.
3. A. gosaviense (Rothpl.) Fosl. mscr.
4. A. nummuliticum (Gümb.) Fosl. mscr.
5. A. Aschersoni (Schw.) Fosl.
 - f. dura (Heydr.) Fosl. mscr.
 - f. mollis (Heydr.) Fosl. mscr.
6. A.? Rosenbergi (K. Mart.) Fosl. mscr.

Sect. II. Episporæ Fosl.

7. A. mirabile Fosl. mscr.*
8. A. Fosliei (Heydr.) Fosl. mscr.
9. A. crispatum (Hauck) Fosl. ex parte? Cfr. Fosl. Syst. Surv.

Gen. **Lithothamnion** Phil. emend.

Subgen. I. **Eulithothamnion** Fosl.

Sect. I. Innatæ Fosl.

1. L. glaciale Kjellm.
 - f. typica.
 - f.? torosa Fosl.
2. L. boreale Fosl.
3. L. varians Fosl.
 - f. verrucosa Fosl.
 - f. irregularis Fosl.
4. L. colliculosum Fosl.
 - f. densa Fosl.
 - f. laxa Fosl.
 - f. rosea (Batt.) Fosl.
5. L. breviaxe Fosl.
6. L. Ungeri Kjellm.
 - f. typica.

- L. Ungerii f. fastigiata Fosl.
f. intermedia (Kjellm.) Fosl.
f. nana Fosl.
f. glomerata Fosl.
f. corymbiformis Fosl.
f. curvirostra Fosl.
7. L. delapsum Fosl.
(f. abbreviata Fosl.)
(f. conglutinata Fosl.)
8. L. botrytoides Fosl.
9. L. fornicatum Fosl.
f. typica.
f. robusta Fosl.
10. L. dimorphum Fosl.
11. L. dehiscens Fosl.
f. typica.
f. grandifrons Fosl.
12. L. ramosissimum Reuss.
13. L. Goldfussi Gümb.
14. L. torulosum Gümb.
15. L. sugarum Rothpl.
16. L. Propontidis Fosl. mscr.*
17. L.? effusum Gümb.
18. L. flabellatum Rosenv.
f. Granii Fosl.
f. Rosenvingii Fosl.
19. L. apiculatum Fosl.
f. typica.
f. parvicocca Fosl.
f. connata Fosl.
f. patula Fosl.
20. L. Battersii Fosl.
21. L. divergens Fosl.
22. L. squarrulosum Fosl. mscr.*
f. australis Fosl.
f. subsimplex (Batt.) Fosl.

1. L. squarrulosum f. palmatifida Fosl. mscr.*
 23. L. gracilescens Fosl.
 24. L. flavescentia Kjellm.
 25. L. foecundum Kjellm.

Sect. II. Evanidæ Fosl.

26. L. tophiforme Unger.
 f. globosa Fosl.
 f. typica.
 f. flexuosa Fosl.
 f. squarrosa Fosl.
 f. alcicornis Kjellm.
 27. L. fruticuloseum (Kütz.) Fosl. (non Norw. Lith.)
 28. L. falsellum Heydr.
 29. L. palmatum Goldf.
 30. L.? mamillosum Gümb.
 31. L. congregatum Fosl.
 32. L. nodulosum Fosl.
 33. L. norvegicum (Aresch.)
 f. genuina.
 f. saxatilis Fosl.
 34. L. uncinatum Fosl.
 35. L. racemosum (Goldf.) Gümb.
 36. L. coralloides Cr. (Fosl. Norw. Lith. ex parte).
 f. flabelligera Fosl.
 f. subvalida Fosl.*
 f. minuta Fosl.*
 37. L. amphiroæformis Rothpl.
 38. L.? Setchellii Fosl.
 39. L.? fibulatum Heydr.
 40. L. Lenormandi (Aresch.) Fosl.
 f. typica.
 f. sublaevis Fosl.
 41. L. squamulosum Fosl.
 42. L. macroblastum Fosl.
 43. L. Bornetii Fosl. mscr.*

44. L. agariciforme (Pall.) Fosl.
 f. hibernica Fosl.
 f.? decussata (Ell. et Sol.) Fosl.
45. L. Philippii Fosl. (L. decussatum (Solms) Fosl. Norw. Lith.)
46. L. magellanicum Fosl.
47. L. capense (Harv.) Fosl.
48. L. Muelleri Lenorm.
49. L. lichenoides (Ell. et Sol.) Fosl.
 f. rupincola Fosl.
 f. patena (Harv.) Fosl. mscr.
 f.? antarctica (Harv.)
50. L. arcticum (Kjellm.) Fosl.
51. L. investiens Fosl.
52. L. Sonderi Hauck.
53. L. orbiculatum Fosl.
54. L. decipiens Fosl.
55. L.? scabiosum (Harv.)
56. L.? kerguelena (Dickie).
 f. genuina.
 f.? obtectula Fosl. mscr.*
57. L. synanablastum Heydr.
58. L. scabriusculum Fosl.
59. L. lævæ (Strömf.) Fosl.
 f. macrospora Fosl.
 f. tenuissima Fosl.
60. L. tenue (Kjellm.) Fosl.
61. L.? adplicatum Fosl.

Subgen. II. *Epilithon* (Heydr.) Fosl. mscr.

62. L. membranaceum (Esper) Fosl. mscr.
 63. L. corticiforme (Kütz.) Fosl.

Gen. *Chætolithon* Fosl.

(Subgen. *Lithonema* in Fosl. Syst. Surv.; non Hass.)

1. Ch. deformans (Solms) Fosl. mscr.

Gen. **Phymatolithon** Fosl.

1. Ph. polymorphum (L.) Fosl.
2. Ph. ocellatum Fosl.
3. Ph. lævigatum Fosl.

Gen. (?) **Clathromorphum** Fosl.

Sect. I. **Endobotroideæ** Fosl.

1. Cl. compactum (Kjellm.) Fosl.
2. Cl. testaceum Fosl.
3. Cl.? loculosum (Kjellm.)

Sect. II. **Epibotroideæ** Fosl.

4. Cl. circumscriptum (Strömf.) Fosl.
5. Cl. coalescens Fosl.
6. Cl. durum (Kjellm.)
7. Cl. evanescens Fosl.

Gen. **Goniolithon** Fosl.

Sect. I. **Lepidomorphum** Fosl. mscr.

(Subgen. *Eugoniolithon* in Fosl. Syst. Surv.)

1. G. papillosum (Zan.) Fosl.
2. G. subtenellum Fosl. mscr.*
3. G.? onkodes (Heydr.)
(excl. specim. cum concept. cyst.?)
4. G.? Carpophylli (Heydr.)

Sect. II. **Cladolithon** Fosl.

5. G. byssoides (Lam.) Fosl.
6. G. moluccense Fosl.
7. G. Tamiense (Heydr.)
8. G. pygmaeum (Heydr.)
9. G. elegans Fosl.

10. G. congestum Fosl. mscr.*
11. G. Bamleri (Heydr.)
12. G. platyphyllum Fosl. mscr.*
13. G. tortuosum (Esp.) Fosl. mscr.
(*Lithophyllum cristatum* Menegh.)
f. cristata (Menegh.)
f. undulosa (Bory).
f. crassa (Lloyd).
f. decumbens Fosl. mscr.*
14. G.? pallescens Fosl.
15. G. oblimans (Heydr.) Fosl. mscr.
16. G.? mamillare (Harv.)
17. G.? Marlothii (Heydr.)
18. G.? Darwini (Harv.)
19. G.? brassica-florida (Harv.)
20. G.? proboscideum Fosl.
21. G.? ponderosum Fosl.
22. G.? retusum Fosl.

Gen. ***Lithophyllum*** Phil. emend.

1. L. racemus (Lam.) Fosl.
sec. spec. in herb. Aresch.
f. typica.
f. crassa (Phil.) Fosl. mscr.
(*L. crassum* f. *conglutinata* Fosl. Norw. Lith.; ex parte).
f. Kaiserii (Heydr.) Fosl.
2. L.? pliocaenum (Gümb.)
3. L.? parisiense (Gümb.)
4. L. affine Fosl.
f. tuberosa Fosl.
f. complanata Fosl.
5. L.? jurassicum (Gümb.)
6. L.? tuberosum (Gümb.)
7. L. calcareum (Pall.) Fosl.
f. attenuata Fosl.

1. L. calcareum f. compressa (M'Calla) Fosl.
f. eunana Fosl. mscr.*
2. L.? procaenum (Gümb.)
3. L.? dentatum (Kütz.)
4. L. fasciculatum (Lam.) Fosl.
f. incrassata Fosl.
f. gyrosa Fosl.
f. dilatata Fosl.
f. subtilis Fosl.
5. L. Andrussowii Fosl. mscr.*
6. L. expansum Phil.
f. genuina.
f. foliacea Fosl.
f. repens Fosl.
f. exigua Fosl.
7. L. incrustans Phil.
f. depressa (Cr.) Fosl.
f. Harveyi Fosl.
f. angulata Fosl. mscr.*
8. L.? Kotschyanum Unger.
9. L.? asperulum (Gümb.)
10. L.? perulatum (Gümb.)
11. L. grumosum Fosl.
12. L. Crouani Fosl. mscr.*
(Melobesia Laminariae Cr. ex parte)
13. L.? amplexifrons (Harv.) Rosan.

Gen. **Melobesia** Lamour. emend.

(Gen. *Choreonema* in Fosl. Syst. Surv.)

Subgen. I. **Eumelobesia** Fosl. mscr.

1. M. farinosa Lamour.
2. M. callithamnioides Cr.
3. M. coronata Rosan.
4. M. confinis Cr.

5. M. confervoides (Kütz.)
6. M. hildenbrandtioides (Cr.)
7. M. zonale (Cr.)
8. M. coccinea (Cr.)
9. M. inaequilaterata Solms.
10. M. Novae Zelandiae Heydr.
11. M. rosea Kütz.

Subgen. II. **Heteroderma** Fosl.

12. M. Notarisii Duf.
13. M. prototypus Fosl.
14. M. Laminariae Cr.
15. M. Corallinae Cr.
16. M.? myriocarpa Fosl.
17. M. Cystosirae Hauck.
18. M.? rhizomae (Heydr.)

Gen. **Dermatolithon** Fosl. mscr.

(Gen. Melobesia in Fosl. Syst. Surv.)

1. D. pustulatum (Lamour.) Fosl. mscr.
 - f. bispora Fosl. mscr. (M. pustulata Lamour. s. s.)
 - f. macrocarpa (Rosan.) Fosl. mscr.
2. D. Lejolisii (Rosan.) Fosl. mscr.
3. D. hapalidioides (Cr.) Fosl. mscr.

Gen. **Choreonema** Schm.

1. Ch. Thuretii (Born.) Schm.

