

Lichenes ab A. Yasuda in Japonia collecti. Continuatio I.

Scriptit

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1. **Usnea molliuscula** WAIN. (sp. n.).

Thallus prostratus, sat mollis, long. circ. 80 mm, basi crass. 1–0,5 mm, teres, cinerascenti stramineo-glauescens, sympodialiter et dichotome ramosus, soraliis minutis aut sat minutis, crebris totus inspersus, ceterum lævigatus. Axis chondroideus tenuis. Stratum myelohyphicum laxè contextum, album, KHO supra axem vix distincte lutescens.

Prov. Harima (232). Ad corticem *Bini*. Ster.

2. **Usnea diffracta** WAIN. (sp. n.).

Thallus prostratus, fragilis, basi crass. 1–0,6 mm, teres, dichotome et sympodialiter ramosus, stramineo-glauescens, lævigatus, sorediis et verruculis et spinulis destitutus, transversim rimosus articulatusve, facile diffractus. Axis chondroideus tenuis. Stratum myelohyphicum crebre contextum, albidum, KHO non reagens.

Prov. Kushiro (231). Ad corticem *Betulæ*. Ster.

3. **Usnea aciculifera** WAIN. (sp. n.).

Thallus subpendulus aut arbusculiformis, sat mollis, basi crass. 0,8–0,6 mm, teres, dichotome et sympodialiter ramosus, stramineus aut glauescens, verruculis spinuloso-acutatis, brevissimis (0,1–0,3 mm longis), et verruculis subsorediosis minutissimis maxima parte variegatim mixtimque creberrime instructus. Axis chondroideus tenuis aut sat tenuis. Stratum myelohyphicum crebre contextum, KHO lutescens fulvescensve.

Prov. Kōzuke (195) et Mimasaka (233). In arboribus. Ster.

4. **Usnea ceratinella** WAIN. (sp. n.).

Thallus prostrato-arbusculiformis, sat mollis, basi crass. 1–0,8 mm, teres, dichotome et sympodialiter ramosus, stramineo-glauescens

aut demum pallido-rubescens, verruculis minutis subsorediosis sat crebris et apices versus soraliis modice dilatatis et minutis crebris instructus, ramis adventitiis brevibus numerosissimis crebrisque ornatus. Axis chondroideus sat crassus. Stratum myelohyphicum crebre contextum, partim aut maculatim croceo-rubescens, in apicibus albidum.

Prov. Rikuzen (230). In ramis arboris. Ster.

5. **Usnea croceorubescens** WAIN. (sp. n.).

Thallus arbusculiformis, sat mollis, basi crass. 1,5–1 mm, teres, dichotome et sympodialiter ramosus, stramineo-glauescens aut partim glaucescenti-rubescens, haud rugosus, spinulis brevissimis parcissimis aut vix ullis, verruculis minutissimis, haud distincte sorediosis, crebris instructus, at basin versus lævigatus, inderdum apices versus ramis adventitiis brevibus ornatus. Axis chondroideus tenuis. Stratum myelohyphicum crebre contextum, partim croceo-rubescens.

Prov. Kushiro (234). In arbore. Ster.

6. **Usnea roseola** WAIN. (sp. n.).

Thallus arbusculiformis, sat mollis, basi crass. 1,5–1 mm, teres, dichotome et sympodialiter ramosus, glaucescens, haud rugosus, soraliis crebris, modice dilatatis aut partim verruculæformibus instructus, aliis verruculis vix ullis. Axis chondroideus sat tenuis. Stratum myelohyphicum crebre contextum, dilutissime roseum.

Prov. Rikuzen, Sendai (138). In arbore. Ster.

7. **Usnea creberrima** WAIN. (sp. n.).

Thallus asbusculiformis, rigidus, basi crass. 1,2–1 mm, teres, haud rugosus, dichotome et sympodialiter usque ad apicem creberrime ramosus, sæpe passim etiam ramis adventitiis brevibus ornatus, verruculis crebris minutis parce subsorediosis instructus, soraliis veris destitutus, basin versus lævigatus. Axis chondroideus crassus. Stratum myelohyphicum crebre contextum, ochraceo-roseum.

Prov. Rikuzen, Yuriage (137). Ad corticem *Pini Thunbergii*. Ster.

8. **Oropogon loxensis** (FÉE) TH. FR.

Prov. Ishikari, mons Daisetsu (225). In arbore. Ster.

9. **Alectoria ochroleuca** (EHRH.) NYL.

Thallus superne et intus KHO addito CaCl_2O_2 lutescens.

Prov. Ishikari, mons Daisetsu (224).

10. **Ramalina intermediella** WAIN. (sp. n.).

Subsimilis *R. subfarinaceae* NYL., sed medulla KHO non reagentem ab ea differens. Thallus cæspites 20–30 mm altos formans, dichotome sat crebre ramosus, sublinearis, compressus, solidus, laciniis basin

versus 0,8–0,3 mm latis, apicem versus sensim attenuatis et filiformibus, albido-stramineis, sat lævigatis, soraliis parvis, marginalibus.

Prov. Inaba (150). Ad corticem arboris.

11. **Thamnolia vermicularis** (L. FIL.) ACH.

Prov. Ishikari, mons Ishikari (220).

12. **Siphula cladonioidea** WAIN. (sp. n.).

Thallus foliaceus, long. circ. 5, lat. 3–5 mm, sæpe convolutus, irregulariter lobatus, crass. 0,2–0,3 mm, superne cinereo-glauescens, inferne pallidus, KHO non reagens. *S. torulosa* (THUNB.) thallo subtus albido, KHO superne et inferne flavescens ab hac specie differt.

Prov. Kōzuke, mons Myōgi (142). In rupe.

13. **Cetraria hiascens** (FR.) TH. FR.

Prov. Ishikari, mons Chūbetsu (214).

14. **Cetraria juniperina** (L.) FR.

Prov. Shinano, mons Yatsugatake (144). Ad corticem *Pini pumilæ*.

15. **Cetraria citrina** TAYL.

Prov. Ishikari, mons Daisetsu (212).

16. **Cetraria cucullata** (BELL.) ACH.

Prov. Ishikari, mons Ashibetsu (213).

17. **Parmelia hyporysalea** WAIN. var. **cinerascens** WAIN.

Medulla KHO non reagens, CaCl_2O_2 rubescens. Thallus superne pseudocyphellis destitutus, qua nota differt a *P. rubescens* (TH. FR.), quæ est *P. olivetorum* NYL. (haud ACH.). Thallo superne cinerascens recedit a *P. olivetorum* var. *hyporysalea* WAIN. (in Lich. Welw. p. 399), quæ autonoma est species.

Prov. Awaji, mons Mikuma (140 p.p.). Ad corticem arboris.

18. **Parmelia inactiva** (ZÄHLBR.) WAIN. *P. tinctorum* var. *inactiva* ZÄHLBR. Lich. Sam. p. 50.

Thallus superne isidiosus, CaCl_2O_2 non reagens, KHO addito CaCl_2O_2 intus rubescens.

Prov. Nagato (190).

19. **Parmelia Borreri** TURN.

Thallus KHO superne flavescens, intus non reagens. Medulla CaCl_2O_2 non reagens, nequidem addito KHO. Soralia supra laminam thalli evoluta. Huc non pertinet *P. dubia* (WULF.) ARN. Lich. Exs. n. 876.

Prov. Kōzuke (131). In rupe.

20. **Parmelia ruderata** WAIN. (sp. n.).

Thallus superne albo-punctatus isidiosusque, isidiis applanatis,

subtus sordide albicans, ad ambitum sat anguste rhizinis destitutus, KHO superne demum dilute flavescens, intus non reagens, at CaCl_2O_2 rubescens. Proxima est *P. rudectæ* ACH., cujus thallus subtus fuscescenti-pallidus aut subtestaceus.

Prov. Inaba, mons Iō (145). Ad corticem arboris. Ster.

21. *Parmelia isidioclada* WAIN. (sp. n.).

Thallus irregulariter laciniatus, margine crenulatus isidiosusque, isidiis tenuissimis brevissimisque, partim granuliformibus, laciniis 5–1 mm latis, superne cinereo-glauescens, opacus, sat lævigatus, subtus albidus pallidusve aut medium versus obscuratus, rhizinis parcis brevibusque instructus, ambitum versus glaber, KHO superne non reagens, intus intense lutescens, deinde rubescens, CaCl_2O_2 non reagens. Affinis *P. rudectæ* ACH. et *P. laceratulæ* NYL.

Prov. Mimasaka (210). Ad corticem arboris. Ster.

22. *Parmelia cetrata* ACH. var. *sorediifera* WAIN.

Prov. Awaji, mons Mikuma (140 p.p.). Prov. Kushiro, Akkeshi (207). Ad corticem arborum. Ster.

23. *Parmelia lævior* NYL. Lich. Jap. p. 28.

Prov. Kōzuke (141). Ad corticem arboris. Fert.

24. *Parmelia petrophila* WAIN. (sp. n.).

Thallus irregulariter laciniatus, laciniis brevibus, crebris, 1,5–0,5 mm latis, irregulariter foveolato-inæqualibus, albido-glauescentibus, nitidis, imbricato-confertis, laxè adpressis, subtus nigricans, rhizinis concoloribus, brevibus, sat parcis, KHO superne vix distincte flavescens, intus lutescens deindeque rubescens, sorediis et isidiis destitutus. Affinis *P. saxatili* (L.) ACH. Ster.

Prov. Kii (193). In rupe.

25. *Parmelia americana* (MEY. et FLOT.) MONT.

Ins. Formosa (208).

26. *Parmelia abstrusa* WAIN. Étud. Lich. Brés. p. 64.

Ins. Formosa (209). Ad corticem arboris.

27. *Parmelia conspersa* (EHRH.) ACH. f. *polita* FLOT. et f. *coralloidea* FLOT.

Prov. Harima (191). In rupe.

28. *Parmelia pubescens* (L.) WAIN. var. *reticulata* (WULF.) WAIN.

Prov. Kaga, mons Hakusan (135). In rupe. Fert.

29. *Anzia leucobatoides* (NYL.) WAIN. *Parmelia* NYL. Lich. Nov. Zel. (1888) p. 28.

Prov. Iwashiro (152). Fert.

30. *Anzia colpota* WAIN. (sp. n.).

Thallus sat crebre dichotome laciniatus, laciniis 2–0,7 mm latis, apice planis, ceterum convexis, albido-glauciscentibus aut apicem versus pallidis, KHO superne lutescens, intus non reagens, subtus nigricans, rhizinis parcissimis, concoloribus. Thallo crassiore, KHO superne reagente a *Parmelia colpode* ACH. differt.

Prov. Rikuzen, Gamō (248). Ad corticem arboris.

31. *Lecanora diplotypa* WAIN. (sp. n.).

Thallus modice incrassatus, areolatus, areolis angulosis, subcontiguus, circ. 0,5–0,3 mm latis, planis, stramineis, nudis, subnitidis, lævigatis, fere squamulæformibus, ad ambitum, haud distincte effiguratus, hypothallo indistincto. Apothecia partim crebra, adnata, basi constricta, lat. 0,4–0,9 mm, tenuia, disco pallido vel subtestaceo-pallido, nudo, subnitido, lævigato, plano, margine tenui, haud prominente, stramineo, subintegro aut leviter crenulato. Hypothecium albidum, ex hyphis erectis formatum. Basis apothecii KHO demum fulvo-rubescens. Hymenium 0,050 mm crassum, jodo cærulescens. Epithecium testaceo-pallidum. Paraphyses arcte cohærentes, haud distincte septatæ. Sporæ 8-næ, distichæ, ellipsoideæ, apicibus rotundatis aut raro obtusis, simplices, long. 0,009–0,006, crass. 0,006–0,004 mm. Affinis est *L. polytropæ* NYL., ad *Squamarias* accedens.

Prov. Kōzuke, mons Nabewari (321). In rupe.

32. *Lecanora leptocheila* WAIN. (sp. n.).

Thallus tenuis, sat continuus aut minute areolato-diffractus, lævigatus, albido-cinerascens, KHO non reagens. Apothecia dispersa, emergenti-adnata, basi parum constricta, lat. 0,6–0,3 mm, tenuia, disco fusco, nudo, opaco, plano, margine tenuissimo, cinerascens, sat integro, subpersistente, haud prominente. Hypothecium albidum. Hymenium circ. 0,120 mm crassum, jodo persistenter cærulescens. Paraphyses arcte cohærentes, crass. 0,001 mm. Epithecium dilute rubricoso-rufescens. Sporæ 8-næ, distichæ, decolores, ellipsoideæ aut oblongæ, apicibus rotundatis aut obtusis, simplices, long. 0,016–0,014, crass. 0,012–0,007 mm. Affinis *L. dispersæ* NYL.

Prov. Kōzuke (352). In rupe.

33. *Lecanora galactinula* WAIN. (sp. n.).

Thallus modice incrassatus, areolatus, areolis contiguus aut partim subdispersis, circ. 0,3–0,2 mm latis, planis aut pr. p. convexis, angulosis aut rotundatis, albido-cinerascens, KHO non reagens. Apothecia crebra, adnata, basi leviter constricta, lat. 0,35–0,25 mm, tenuia, disco rufo, nudo, sat opaco, plano, margine tenui, albido-

cinerascente, integro aut minutissime crenulato, haud prominente. Hypothecium decoloratum. Hymenium jodo cærulescens. Epithecium rubricoso-rufescens. Sporæ 8-næ, subdistichæ, decolores, ellipsoideæ, apicibus rotundatis aut obtusis, simplices, long. 0,009–0,007, crass. 0,005–0,004 mm. *L. galactiniza* NYL. (CROMB. Lich. Cap. p. 173) huic speciei habitu est similis, at thallo KHO flavescente et apotheciis 0,3–0,5 mm latis ab ea differt, affinis *L. campestri* (SCHÆR.). *L. galactinella* NYL. (l.c.) apotheciis a thallo parum prominentibus et margine integro a planta nostra distinguitur.

Prov. Kōzuke (358). In rupe.

34. ***Lecanora rufoalbida*** WAIN. (sp. n.).

Thallus modice incrassatus, areolatus, areolis contiguis aut parce subdispersis, 0,6–0,2 mm latis, angulosis aut rotundatis, leviter convexis, albido-cinerascentibus, lævigatis, parum nitidis, KHO non reagentibus, hypothallo nigricante limitatus. Apothecia sparsa et partim crebra, basi constricta, tenuia, lat. 0,9–0,5 mm, disco rufo, nudo, opaco, margine tenui, albido, subintegro, haud prominente. Sporæ decolores, ellipsoideæ, simplices, long. 0,012–0,014, crass. 0,006 mm (sec. YASUDAM). Apotheciis et sporis majoribus differt a *L. galactinula* WAIN.

Prov. Kōzuke (333). In rupe.

35. ***Lecanora aggregans*** WAIN. (sp. n.).

Thallus areolatus, areolis dispersis, 0,5–0,2 mm latis, sat crassis, leviter convexis, fere verrucæformibus, albido-cinerascentibus aut cinereis, KHO non reagentibus, hypothallo obscurato parum evoluto. Apothecia lat. 0,2–0,3 mm, sæpe aggregata contiguaque, acervulis sparsis, tenuissima, basi parum constricta, sæpe flexuosa, disco rufescente aut testaceo, nudo, margine tenuissimo, subintegro. Hypothecium pallidum. Epithecium pallidum, KHO non reagens. Paraphyses crass. 0,0005 mm, increbre ramoso-connexæ. Asci clavati, long. circ. 0,070, crass. 0,018 mm. Sporæ 8-næ, monostichæ aut distichæ, decolores, simplices, ellipsoideæ, apicibus rotundatis, long. 0,010–0,006, crass. 0,006–0,0045 mm. Gonidia pleurococcacea.

Prov. Kōzuke, mons Nabewari (356). In rupe.

36. ***Lecanora glaucodeella*** WAIN. (sp. n.).

Thallus sat tenuis, verruculosus, verruculis 0,1–0,15 mm latis, convexis, sparsis et partim contiguis, partim farinoso-sorediosus, stramineus aut stramineo-glauescens, hypothallo indistincto. Apothecia lat. 0,9–0,6 mm, sparsa, modice incrassata, basi constricta, disco livido-pallescente, tenuiter pruinoso, margine modice incrassato,

rotundato-convexo, integro aut verruculoso, thallo concolore. Hypothecium albidum. Hymenium circ. 0,1 mm crassum, jodo persistenter cærulescens. Epithecium dilutissime subrufescens. Paraphyses arcte cohærentes, crass. 0,0015 mm, apice leviter incrassatæ, increbre septatæ. Sporæ 8-næ, subdistichæ, decolores, simplices, ellipsoideæ, apicibus rotundatis, long. 0,010–0,008, crass. 0,007–0,005 mm. Affinis *L. glaucolutescenti* NYL. et *L. glaucodeæ* NYL.

Prov. Kōzuke (354). In rupe.

37. ***Lecanora conspersa*** WAIN. (sp. n.).

Thallus modice incrassatus, areolatus, areolis contiguis aut dispersis, vulgo leviter aut demum bene convexus, flavido-stramineis, lævigatis, subnitidis, esorediatis, hypothallo indistincto. Apothecia lat. 0,7–0,5 mm, sparsa, tenuia, basi leviter constricta, disco plano, testaceo aut rufescenti-testaceo, nudo, subnitido, lævigato, margine tenui, leviter crenulato, haud prominente, thallo concolore. Epithecium rufescens. Sporæ 8-næ, decolores, simplices, ellipsoideæ, apicibus rotundatis, long. 0,010–0,009, crass. 0,007–0,005 mm. Affinis *L. perspersæ* NYL. et *L. chlorophæodi* NYL.

Prov. Kōzuke (339). In rupe.

38. ***Lecanora pseudisterella*** WAIN. (sp. n.).

Thallus crassus aut modice incrassatus, continuus aut areolatus aut demum rimoso-diffractus, verruculoso-inæqualis, albido-cinerascens vel subalbidus, sat opacus, KHO flavescens. Apothecia lat. 0,7–0,4 mm, primum subimmersa, demum emergentia et basi levissime constricta, tenuia, disco plano aut leviter convexo, rufo, nudo, opaco, lævigato, margine tenui, haud prominente, subintegro, albido. Hypothecium albidum. Hymenium jodo persistenter cærulescens. Epithecium rufescens. Sporæ 8-næ, distichæ, decolores, simplices, ellipsoideæ, apicibus rotundatis, long. 0,010–0,007 (–0,013 mm, observante YASUDA), crass. 0,007–0,005 mm. Proxima est *L. galactinizæ* NYL. (CROMB. Lich. Cap. p. 173), quæ apotheciis adhuc minoribus et thallo tenuiore ab ea differt. *L. pseudistera* NYL. apotheciis paullo majoribus ab his recedit, at minoribus quam ia *L. campestri* (SCHÆR.) instructa est. *L. expansa* (ACH.) sec. herb. ACH. apotheciis fere sicut in *L. pseudistera* NYL. et ab ea vix distinguenda.

Prov. Iwashiro, mons Iide (318). In rupe.

39. ***Lecanora subimmergens*** WAIN. (sp. n.).

Thallus modice incrassatus, lævigatus, areolato-diffractus, areolis minutis, albido-cinerascens, opacus, KHO lutescens, dein fulvescens, hypothallo indistincto. Apothecia lat. 0,8–0,5 mm, diu immersa,

demum leviter emergentia, basi haud constricta, disco plano aut raro demum convexo, rufo, nudo, leviter nitido, lævigato, margine integro aut raro flexuoso, haud prominente, tenui. Hypothecium pallidum. Hymenium circ. 0,070 mm crassum, jodo persistenter cærulescens. Epithecium rufescens. Paraphyses arcte cohærentes, crass. 0,0015 mm, apice haud incrassatæ. Sporæ 8-næ, decolores, simplices, ellipsoideæ, apicibus rotundatis, long. circ. 0,007–0,006, crass. 0,006–0,005 mm. Thallo lævigato et apotheciis minus emergentibus a specie præcedente differt.

Prov. Kōzuke (355). In rupe.

40. **Lecanora gallifera** WAIN. (sp. n.).

Thallus modice incrassatus, continuus aut diffractus, verruculoso-inæqualis, albido-cinerascens, KHO non reagens, sæpe tuberculis hemisphæricis 3,5–0,6 mm latis, morboris sparsis instructus, hypothallo indistincto. Apothecia lat. 2–1,2 mm, elevata, basi bene constricta, disco plano, rufescente, nudo, opaco, margine sat crasso, sublobulato-crenato, modice prominente. Hypothecium albidum, a hymenio haud distincte limitatum. Paraphyses arcte cohærentes, apice leviter incrassatæ. Sporæ 8-næ, distichæ aut monostichæ, decolores, simplices, ellipsoideæ, apicibus rotundatis, long. 0,016–0,010, crass. 0,007–0,005 mm. Habitu inter *L. intumescens* et *L. allophanam* intermedia est.

Prov. Kōzuke, mons Akagi (346). Ad corticem arboris.

41. **Lecanora cinereocarnea** (ESCHW.) WAIN.

Prov. Kii (349). Ad corticem arboris.

42. **Lecanora atra** (HUDS.) ACH.

Prov. Kōzuke, mons Akagi (323). Ad corticem arboris.

43. **Lecanora (Aspicilia) decorata** WAIN. (sp. n.).

Thallus crassus (1–6 mm), inæqualiter incrassatus, ceterum lævigatus, diffractus, stramineus, partim demum obscuratus, KHO + CaCl_2O_2 superne lutescens, intus jodo non reagens. Apothecia lat. 0,7–4 mm, thallo immersa aspicilioideæ aut raro demum emergentia et margine thallino basi constricto instructa, disco nigro, nudo, nitido, haud impresso. Hypothecium stramineo-pallidum albidumve. Hymenium crassit. 0,080–0,110 mm, jodo cærulescens. Epithecium cæruleo-æruginosum (KHO sordide olivaceum aut olivaceo-smaragdulum), strato gelatinoso 0,010–0,006 mm crasso decolore lævigatoque obductum. Paraphyses arcte cohærentes, simplices, crass. 0,0015 mm, apice capitatae 0,004–0,005 mm crassæ. Sporæ 8-næ, distichæ,

decolores, simplices, ellipsoideæ apicibusque rotundatis aut subglobosæ, long. 0,011–0,015, crass. 0,006–0,009 mm.

Prov. Shinano, mons Yatsugatake (130). In rupe.

44. **Lecanora cinerea** (L.) SOMMERF.

Prov. Kōzuke, mons Nabewari (347). In rupe.

45. **Lecanora gibbosa** (ACH.) NYL.

Prov. Kōzuke (322). In rupe.

46. **Lecanora calcarea** (L.) SOMMERF. var. **Hoffmanni** (ACH.) SOMMERF.

Prov. Kōzuke (257, 303). In rupe.

47. **Lecanora phymatodiscus** WAIN. (sp. n.).

Thallus modice incrassatus, lævigatus, crebre areolato-rimosus, cervinus vel pallide cinereo-fuscescens, opacus, nec KHO nec jodo reagens, hypothallo indistincto. Apothecia thallo immersa, disco 0,3–0,2 mm lato, subanguloso difformive, impresso, nigro, opaco, nudo, verruca depressa instructo. Hypothecium albidum. Hymenium jodo cærulescens. Epithecium rufescens. Paraphyses crass. 0,001 mm, crebre septatæ, parce ramoso-connexæ, gelatinam abundantem percurrentes. Sporæ 8-næ, distichæ, ellipsoideæ, decolores, simplices, long. 0,020–0,024, crass. 0,009–0,010 mm. *L. griseolam* TH. FR. in memoriam revocans.

Prov. Kōzuke, mons Akagi (320). In rupe.

48. **Lecanora coiliodes** WAIN. (sp. n.).

Thallus modice incrassatus, verruculoso-inæqualis aut verrucoso-areolatus, partim subdispersus, stramineus, opacus, KHO non reagens, hypothallo indistincto. Apothecia verrucis immersa, disco 0,2–0,5 mm lato, bene impresso, atro, nudo. Hypothecium albidum. Hymenium 0,050–0,055 mm crassum, jodo cærulescens. Epithecium olivaceum, KHO rufescens. Paraphyses arcte cohærentes, crass. 0,001 mm, apice 0,003 mm crebre septatæ, in KHO laxè cohærentes. Sporæ distichæ, decolores, ellipsoideæ, simplices, long. circ. 0,016, crass. 0,010 mm. Affinitate incerta.

Prov. Kōzuke (353). In rupe.

49. **Placopsis pacifica** WAIN. (sp. n.).

Thallus sat lævigatus, ad ambitum breviter laciniatus, medium versus late sorediosus, soraliis confluentibus, haud prominentibus, soraliis erasis demum leproso-verruculosus. Cum *Pl. gelida* ab auctoribus nonnullis commixta. Etiam e Nova Zelandia (a L. LINDSAY lecta) in herb. NYL. sub hoc nomine adest.

Prov. Iwashiro, mons Bandai (164). In rupe.

50. **Ochrolechia pallescens** NYL. (variatio aut autonoma species).

KHO addito CaCl_2O_2 thallus superne rubescens et intus lutescens, margo apothecii superne et intus rubescens, discus rubescens. CaCl_2O_2 solo non reagentes. Nimis parce lecta.

Prov. Kōzuke, mons Nabewari (236). In rupe.

51. **Ochrolechia orientalis** WAIN. (sp. n.).

Margine apotheciorum extus verrucoso differt ab *O. upsaliensi* (L.), quæ reactionibus ei est similis. Planta in Lich. YASUD. Jap. p. 2 hoc nomine determinata ad *O. orientalem* pertinet.

Prov. Hōki, mons Daisen (99). Ad corticem arboris.

52. **Ochrolechia Yasudæ** WAIN. Lich. YASUD. Jap. (1918) p. 2.

Thallus et margo et discus apotheciorum nec KHO nec CaCl_2O_2 reagens. Thallus isidiis crebris, brevibus, partim verrucæformibus. Margine apotheciorum transversim striato aut sat lævigato.

Prov. Kōzuke, mons Akagi (156 p.p.). Ad corticem arboris.

53. **Ochrolechia akagiensis** YASUDA in litt.

Thallus modice incrassatus, verruculoso-inæqualis, albido-cinereus, KHO addito CaCl_2O_2 lutescens maculis parvis rubris. Margo et discus apotheciorum his reagentiis rubescens, CaCl_2O_2 dilute rubescens. Apothecia lat. 1,5–1 mm, disco pallido, pruinoso, margine modice incrassato, prominente, sat lævigato. Sporæ observante cel. YASUDA long. 0,065–0,067, crass. 0,020–0,022 mm.

Prov. Kōzuke, mons Akagi (156 a). Supra muscos destructos.

54. **Ochrolechia diademata** WAIN. (sp. n.).

Thallus sat crassus, albido-cinereus, isidiis crebris, brevibus, 0,15–0,25 mm crassis, partim verrucæformibus instructus, sorediis destitutus, KHO addito CaCl_2O_2 rubescens. Margo et discus apotheciorum eodem modo reagentes. KHO et CaCl_2O_2 solo haud reagentes. Apothecia lat. 1,5–1 mm, disco albido-pruinoso, margine bene prominente, crebre abundanterque verruculoso. Affinis *O. akagiensi* et *O. Yasudæ* quibuscum crescit.

Prov. Kōzuke, mons Akagi (156 b). Ad corticem vetustum arboris.

55. **Pertusaria (Lecanorastrum) flavosulphurea** WAIN. (sp. n.).

Thallus modice incrassatus, leviter verruculoso-inæqualis, stramineo-flavescens (intus albus), opacus, KHO non reagens, at addito CaCl_2O_2 rubescens, soraliis prominentibus, 0,5 mm latis, albis.

Prov. Harima, mons Hokke (174). In rupe.

56. **Pertusaria perfida** NYL. Lich. Nov. Zel. (1888) p. 69.

Thallus et discus KHO non reagens (etiam in orig. NYL.).

Prov. Kōzuke (360). In rupe.

57. *Pertusaria subfallens* WAIN. (sp. n.).

Thallus modice incrassatus, lævigatus aut partim rugosus, cinereo-glaucescens, leviter nitidus, KHO addito CaCl_2O_2 intus lutescens. Pseudostromata KHO addito CaCl_2O_2 extus et intus lutescentia, apothecia solitaria aut raro plura continentia. *P. commutata* et *P. variolosæ* subsimilis.

Prov. Kōzuke, mons Akagi (294, 297). Ad corticem arborum.

58. *Pertusaria velatula* WAIN. (sp. n.).

Thallus modice incrassatus, sat lævigatus aut inæqualis, albido-glaucescens aut cinerascens, parum nitidus, KHO non reagens, at addito CaCl_2O_2 lutescens et demum rubescens. Pseudostromata apothecia solitaria continentia, KHO non reagentia, at addito CaCl_2O_2 intus lutescentia et demum rubescentia. Sporæ solitariae, oblongæ, long. 0,140–0,160, crass. 0,035–0,045 mm, membrana haud striata (observante cel. YASUDA). Affinis *P. velata*.

Prov. Kōzuke, mons Akagi (295). Ad corticem arboris.

59. *Pertusaria vaginatula* WAIN. (sp. n.).

Thallus modice incrassatus, sat lævigatus, cinerascens, nec jodo, nec KHO, nec CaCl_2O_2 reagens. Pseudostromata apothecia solitaria aut pauca continentia, intus KHO addito CaCl_2O_2 leviter rubescentia. Affinis *P. subvaginata* NYL.

Prov. Kōzuke, mons Akagi (299). Ad corticem arboris.

60. *Pertusaria leucosora* NYL.

Prov. Kōzuke, mons Nabewari (301). In rupe.

61. *Pertusaria* (*Porophora*) *pustulata* (ACH.) NYL.

Prov. Inaba (176). Ad corticem arboris.

62. *Pertusaria stenostoma* WAIN. (sp. n.).

Thallus tenuis, sat lævigatus aut leviter verruculoso-inæqualis, albido-cinerascens, nec KHO nec CaCl_2O_2 reagens. Pseudostromata sat crebra, verrucas formantia subhemisphæricas aut diffformes, 0,5–1,2 mm latas, basin versus leviter dilatatas aut sat abruptas, apothecia solitaria continentia aut rarius 2–3 confluentia, nec KHO nec CaCl_2O_2 reagentia, disco leviter impresso, nigricante, anguloso-rotundato aut sæpe oblongo difformive, lat. 0,1–0,15, long. 1–0,1 mm. Sporæ 8-næ–2-næ, oblongæ, long. 0,064–0,080, crass. 0,026 mm, membrana 0,003–0,004 mm crassa, haud striata. Facie externa *P. pustulatam* in memoriam revocans.

Prov. Hōki, mons Daisen (173). Ad corticem arboris.

63. *Pertusaria lævis* KNIGHT; MÜLL. ARG. Lich. Beitr. n. 771, Consp. Lich. Nov. Zel. p. 54.

Prov. Kōzuke (277). Ad corticem arboris.

64. *Pertusaria conformis* WAIN. (sp. n.).

Sporis 8-nis, sec. YASUDAM 0,160–0,200 mm longis, 0,050–0,062 mm crassis, membrana haud striata differt a *P. subobductante* NYL., Lich. Jap. p. 54. Thallus et pseudostromata extus haud reagentia, intus lutescentia deindeque (præsertim zona gonidiali) subrubescens vel aurantiaco-rubescens. Habitu *P. leioplacæ* similis est.

Prov. Kōzuke (286). Ad corticem arboris.

65. *Pertusaria corallina* (L.) ARN.

Prov. Inaba (134). In rupe.

66. *Pertusaria cinereoobscurata* WAIN. (sp. n.).

Thallus crassus aut sat crassus (1–0,2 mm), inæqualis, obscure cinereus, nec KHO nec CaCl_2O_2 reagens. Pseudostromata valde difformia, tuberculosa, 1–6 mm lata, 0,5–2,5 mm alta, inæqualia, aut parum conspicua et vix prominentia, intus demum leviter lutescentia et maculis dilutissime sordide rubescentibus, apothecia numerosa aut solitaria continentia, verrucis leviter prominentibus indicata, disco inconspicuo. Sporæ sec. cel. YASUDAM 4-næ, long. 0,115–0,175, crass. 0,043–0,060 mm, membrana lævigata. Ad sect. *Irregulares* MÜLL. ARG. pertinet.

Prov. Kōzuke, mons Akagi (283). Ad corticem arboris.

67. *Pertusaria conferta* WAIN. (sp. n.).

Thallus modice incrassatus aut sat crassus, leviter inæqualis, cinerascens aut sordide albicans, KHO zona gonidiali partim rubescens, parum visibilis, pseudostromatis crebris instructus. Pseudostromata tuberculiformia, 1–0,2(–2) mm lata, irregularia, crebra contiguaque aut subconfluentia, lateribus sæpe præruptis, raro basi leviter constricta, zona gonidiali KHO partim rubescens. Sporæ “binæ, long. 0,130–0,165, crass. 0,030–0,045 mm, membrana lævigata” (sec. cel. YASUDAM). *P. subobductans* NYL. var. *cinereoglauca* WAIN. reactione thalli ab ea differt.

Prov. Kōzuke (287, 291, 292). Ad corticem arborum. N. 283 ad formam *obscurierem* WAIN., thallo intense cinereo instructam, pertinet.

68. *Pertusaria petrophyes* KNIGHT, Contr. Lich. N. S. Wales p. 47; NYL. Fl. 1886 p. 326; WAIN. React. Lich. Müll. p. 9.

Var. *hokiensis* WAIN. Thallus et pseudostromata albido-cinerascentia, KHO non reagentia. Sporæ (observante cel. YASUDA) long.

0,060–0,078, crass. 0,026–0,032 mm, membrana lævigata. Pseudostromata partim contigua.

Prov. Hōki (180). In rupe.

69. *Pertusaria inabensis* WAIN. (sp. n.).

Subsimilis *P. nagasakensis* NYL., at thallo et pseudostromatibus KHO extus impure fulvescentibus, intus lutescentibus et sporis paullo majoribus, sec. cel. YASUDAM long. circ. 0,128, crass. 0,058 mm, membrana lævigata. Thallus crassus, substrato laxè affixus. Pseudostromata irregularia, ostioliis impressis.

Prov. Inaba (285).

70. *Pertusaria rugulosa* WAIN. (sp. n.).

Thallus sat tenuis, lævigatus, partim verruculis increbre inspersus, albidus, KHO demum maculis rubescentibus, intus non reagens. Pseudostromata sat dispersa, sat depressa, 1–2 mm lata, 1–5 apothecia continentia, lateribus præruptis, ostioliis nigris, parvis, dispersis, marginibus ostiolaribus vulgo impressis, KHO extus demum rubescentia, intus non reagentia. Sporæ binæ, long. 0,150–0,110, crass. 0,040–0,030 mm, membrana costulata. *P. subrugosa* NYL., Lich. Jap. p. 52, huic habitu est similis, ostioliis lutescentibus indistinctis et reactione thalli ab ea differens.

Prov. Kōzuke, mons Akagi (289). Ad corticem arboris.

71. *Pertusaria Yasudæ* WAIN. (sp. n.).

Thallus modice incrassatus, verrucoso-inæqualis, albidus, KHO non reagens. Pseudostromata depresse hemisphærica, lateribus præruptis, apice impresso, in depressione difformi cinereo-nigricante ostiola 7–1 continentia, ostioliis confertis, punctiformibus, nigris, partim contigua aut confluentia, sat lævigata aut ambitu leviter verrucosa, KHO non reagentia. Sporæ “binæ, long. 0,100–0,135, crass. 0,030–0,040 mm, membrana lævigata” (sec. cel. YASUDAM). Subsimilis *P. leucodi* KNIGHT (NYL. Lich. Nov. Zel. p. 71), quæ sporis ab ea differt.

Prov. Hōki (177 a). Ad corticem arboris.

72. *Pertusaria commixta* WAIN. (sp. n.).

Thallus modice incrassatus, verrucoso-inæqualis, albidus, KHO in zona gonidiali levissime subrubescens. Pseudostromata irregulariter verrucosa, difformia, contigua et confluentia, lateribus præruptis aut basi leviter insculptis, apice leviter impresso, in depressione difformi dilute cinereo nigricante ostiola solitaria aut pauca continentia, zona gonidiali KHO rubescente. Sporæ “binæ, long. 0,114–0,130, crass. 0,030–0,034 mm, membrana lævigata” (sec. cel. YASUDAM). Affinis speciei præcedenti.

Prov. Inaba (177 b). Ad corticem arboris.

73. *Pertusaria kurohiensis* WAIN. Lich. Jap. (1918) p. 3.

Sporæ binæ, long. 0,140–0,200, crass. 0,040–0,050 mm, membrana lævigata (sec. cel. YASUDAM). Proxime affinis *P. diffidenti* NYL., Lich. Jap. p. 52.

Prov. Kōzuke, mons Akagi (281). Prov. Mutsu, mons Hakkōda (179). Ad corticem arborum.

74. *Pertusaria akagiensis* WAIN. (sp. n.).

Thallus sat crassus, crebre plicato- et subverrucoso-inæqualis, cinerascens, KHO superne non reagens, intus lutescens et demum fulvo-rubescens. Pseudostromata partim crebra, tuberculiformia, lat. 5–1 mm, basi leviter insculpta, apothecia numerosa continentia, intus lutescentia deindeque fulvo-rubescens, extus maculis dilute rubescentibus, ostiolis haud aut parum impressis, margine ostiolarum annulum parum distinctum formante. Sporæ 4-næ, long. 0,180–0,270, crass. 0,050–0,060 mm, membrana lævigata. Affinis *P. kotsukensi* WAIN. (Lich. Jap. p. 3), quæ vix nisi reactionibus ab ea differt.

Prov. Kōzuke, mons Akagi (280, 284). Ad corticem arborum.

75. *Pertusaria sublæviganda* WAIN. (sp. n.).

Thallus sat lævigatus aut leviter verruculis depressis increbre inspersus, cinereo-glaucescens, KHO zona gonidiali demum rubescente. Pseudostromata dispersa, lat. 1–3,5 mm, sæpe applanata, difformia, lateribus præruptis, ad zonam gonidiale KHO demum rubescentia, apothecia numerosa continentia, margine ostiolarum parum prominente, ostiolo minuto, sæpe foveolato. Sporæ "8-næ, long. 0,058–0,094, crass. 0,022–0,028 mm, membrana lævigata" (sec. cel. YASUDAM). Reactionibus differta *P. læviganda* NYL. Lich. Jap. p. 53.

Prov. Kōzuke, mons Akagi (288). Ad corticem arboris.

Var. *pauperior* WAIN.

Sporæ binæ, long. 0,115–0,145, crass. 0,035–0,040 mm, membrana lævigata (sec. cel. YASUDAM).

Prov. Kōzuke, mons Akagi (290). Ad corticem arboris.

76. *Perforaria epileiodes* WAIN. (sp. n.).

Thallus tenuis, verruculis minutis inspersus, cinerascens, KHO non reagens. Apothecia sat crebra, subglobosa, lat. 0,6–0,8 mm, basi insculpta, apice leviter impresso, depressione plano, albido-pallido, cinereo-glaucescens-limbato. Perithecium albidum, globosum, jodo cærulescens, in depressione apothecii denudatum, ceterum amphithecio thallino, gonidia continente, extus cinerascens obductum, ostiolo minutissimo. Paraphyses simplices, crass. 0,0008 mm, gelatinam

abundantem percurrentes. Sporæ 8-næ—2-næ, distichæ, decolores, ellipsoideæ aut oblongæ, long. 0,056–0,064, crass. 0,024–0,030 mm, membrana 0,002 mm crassa, lævigata. Affinis *Perforariæ epileiæ* (NYL. Lich. Jap. p. 57), quæ cephalodiis numerosis, apotheciis majoribus et thallo crassiore ab ea differt.

Prov. Harima, mons Hokke (169). Ad corticem arboris.

77. **Pilophorus Hallii** (TUCK.) WAIN. (*Pilophoron clavatum* NYL. Lich. Jap. p. 17).

Prov. Kōzuke (276). In rupe.

78. **Placodium granulosum** (SCHÆR.) WAIN.

Thallo sorediis instructo a *Pl. elegante* differens.

Prov. Kōzuke, mons Mitsumine (143). In rupe.

79. **Placodium pyropæcilum** (NYL.) WAIN. (*Lecanora pyropæcila* NYL. in CROMB. Lich. Cap., 1877, p. 172).

Thallus areolatus (etiam in specimine orig.), dispersus, haud granulosus. Affine *Pl. Müllerii* WAIN.

Prov. Kōzuke (312). In rupe.

80. **Placodium fumosum** WAIN. (sp. n.).

Thallus sat tenuis, crustaceus, areolato-diffractus areolatusve, areolis contiguus, cinereis, sat lævigatis. Apothecia tota basi substrato adnata, haud constricta, lat. 0,4–0,25 mm, tenuia, quasi inter areolas thalli sita et eas parum superantia, disco vitellino aut sordide vitellino-rubescente, nudo, plano, margine tenuissimo, nigricante, discum haud superante. Sporæ haud evolutæ. Affine *Pl. benguellensi* NYL. et *Pl. Janino* WAIN.

Prov. Kōzuke, mons Nabewari (338). In rupe.

81. **Placodium gilvofumosum** WAIN. (sp. n.).

Thallus tenuis, crustaceus, sat continuus, leviter verruculoso-inæqualis, impure albidus aut subcinerascens. Apothecia sat crebre, basi bene constricta, lat. 0,5–0,3 mm, crass. circ. 0,180 mm, disco plano, vitellino-rubescente, nudo, margine modice incrassato, prominente, integro, cinerascens aut raro cæruleo-nigricante. Excipulum gonidia continens. Epithecium fulvescens, KHO purpureum. Sporæ 8-næ, orculæformes, apicibus obtusis, decolores, long. 0,011–0,014, crass. 0,006–0,007 mm. Affine *Placodio Bærgesenii* WAIN.

Prov. Kōzuke (341). In rupe.

82. **Placodium ferrugineum** (HUDS.) HEPP.

Prov. Inaba, mons Sensoku (151 p.p., cum *Anaptychia hypochræa*). Ad corticem arboris.

83. **Anaptychia hypochræa** WAIN. (sp. n.).

Thallus laciniis circ. 10–15 mm longis, 2–0,2 mm latis, adscendentibus, laxe imbricatis, superne albido-cinerascentibus, KHO non reagentibus, subtus decorticatis, ochraceis et KHO violascentibus, margine fibrilloso, fibrillis simplicibus aut parce ramosis, subalbidis. Affinis *A. podocarpæ*.

Prov. Inaba, mons Sensoku (151). Ad corticem arboris. Ster.

84. **Anaptychia hypoleuca** (MUHLENB.) WAIN. var. **Schærerii** HEPP. Sorediis destituta.

Prov. Rikuzen, Shōbuta (364). Ad corticem *Pini densifloræ*.

85. **Anaptychia heterochroa** WAIN. (sp. n.).

Thallus iteratim dichotome ramosus, ramis laxe adpressis, circ. 1–0,5 mm latis, superne albidis, KHO vix distincte flavescentibus, intus lutescentibus, subtus decorticatus, ochraceus et KHO purpureus, fibrillis marginalibus, nigris, simplicibus et demum squarroso-ramosis-simis et soraliis marginalibus instructus. Affinis *A. hypoleucæ*.

Prov. Kōzuke (229). Ad corticem *Pini densifloræ*. Ster.

86. **Physcia glaucovirescens** NYL. (Syn. Lich. p. 419, Fl. 1869 p. 322).

Var. **tenebricosa** WAIN.

Thallus subtus nigricans, rhizinis nigricantibus.

Prov. Nagato (256). In rupe.

87. **Physcia trichophora** HUE (Lich. Extra-eur. n. 348).

Var. **cinereoalbida** WAIN.

Thallus cinereo-albicans, KHO non reagens, subtus sordide vel pallide albicans, rhizinis brevibus, long. 0,5–0,2 mm, increbris. Excipulum glabrum.

Prov. Inaba (45, 153). Ad corticem arboris.

88. **Physcia imbricata** WAIN. (sp. n.).

Thallus foliaceo-squamosus, KHO non reagens, squamis varie confertis, long. 5–1, lat. 1,5–0,5 mm, adpressis, demum marginem versus sorediosis, subcuneatis, lobatis vel irregulariter laciniatis, superne glauco-cinerascentibus aut partim cervinis, subtus nigricantibus, rhizinis nigricantibus, brevibus. Apothecia excipulo subtus trichoso, disco nigricante. Affinis *Ph. cycloseli* ACH.

Prov. Rikuzen, Shiogama (269). Ad corticem *Pini densifloræ*.

89. **Melanaspicilia fumosa** WAIN. (sp. n.).

Thallus crustaceus, areolatus aut rimoso-diffractus, areolis 2–0,5 mm latis, angulosis, lævigatis, modice incrassatis, cinereis, opacis, intus KHO flavescentibus. Apothecia sat crebra, aspicilioidea, areolis immersa, immarginata, disco nigro, nudo, plano, thallum haud super-

ante. Hypothecium fusconigrum. Epithecium fusconigrum. Sporæ 8-næ, fuscescentes, ellipsoideæ, 1-septatæ, septo sat tenui, membrana æqualiter incrassata, long. circ. 0,017, crass. 0,009 mm. Medulla jodo hand cærulescens.

Prov. Kōzuke (329). In rupe.

90. *Melanaspicilia kozukensis* WAIN. (sp. n.).

Thallus crustaceus, sat tenuis, areolatus, areolis adnatis, vulgo contiguis, angulosis, 0,3–0,5 mm latis, cinereo-pallidis aut albido-cinerascentibus, KHO non reagentibus, medulla non cærulescente, hypothallo nigricante parce conspicuo. Apothecia dispersa, areolis immersa aut raro demum leviter emergentia, immarginata aut raro demum margine thallino, integro, tenui, thallum parum superante instructa, disco 0,4–0,2 mm lato, nigro, nudo, plano. Hypothecium pallidum. Hymenium superius sat dilute rufescens. Sporæ 8-næ, fuscescentes, ellipsoideæ, 1-septatæ, haud constrictæ, long. circ. 0,017–0,018, crass. 0,010–0,012 mm, membrana sat inæqualiter incrassata. Habitu subsimilis *Lecanoræ confragosulæ* NYL. (in CROMB. Lich. Cap. p. 172), quæ thallo areolato-squamuloso, areolis hypothallo nigro instratis, ab ea differt. Etiam *Rinodina ocellata* hanc in memoriam revocans.

Prov. Kōzuke (315). In rupe.

91. *Melanaspicilia crebra* WAIN. (sp. n.).

Thallus sat tenuis, crustaceus, areolatus, areolis 0,5–0,2 mm latis, angulosis, contiguis, planis, lævigatis, cinereo-fuscescentibus, opacis, nec KHO nec jodo reagentibus, hypothallo indistincto. Apothecia crebra, aspicilioidea, areolis immersa, immarginata, disco 0,3–0,2 mm lato, nigro, nudo, plano, thallum haud superante. Hypothecium albidum. Epithecium fuscescens. Sporæ 8-næ, distichæ, nigricantes, ellipsoideæ, 1-septatæ, septo tenui, membrana æqualiter modice incrassata, long. 0,010–0,012, crass. 0,005–0,007 mm.

Prov. Kōzuke (317). In rupe.

92. *Rinodina cervina* WAIN. (sp. n.).

Thallus sat tenuis aut modice incrassatus, crustaceus, areolatus, areolis 1–0,2 mm latis, angulosis, planis, sat lævigatis aut levissime verruculoso-inæqualibus, cervino-luridis vel cinereo-fuscescentibus, opacis, KHO non reagentibus, hypothallo indistincto. Apothecia partim sat crebra, thallo adnata, basi leviter constricta, 0,3–0,4 mm lata, margine thallino, tenui, integro, discum haud superante, disco plano, fusco-nigricante aut partim pallido-rufescente, nudo. Hypothecium decoloratum. Paraphyses apice clavatæ fuscescentesque aut raro

pallidiores. Excipulum jodo non reagens. Sporæ 8-næ, nigricantes, ellipsoideæ, 1-septatæ, long. 0,014–0,017, crass. 0,007 mm, septo tenui, membrana sat æqualiter incrassata. *R. milvinæ* affinis.

Prov. Kōzuke (359). In rupe.

93. **Rinodina subalbida** (NYL.) WAIN. *Lecanora sophodes* ACH.
**L. subalbida* NYL. Lich. Jap. p. 40.

Excipulum jodo non reagens. Sporæ long. 0,017–0,024, crass. 0,009–0,011 mm, 1-septatæ, membrana inæqualiter incrassata, septo tenui aut sat tenui aut raro crasso et poro instructa. Apothecia margine integro, albedo. Thallus verrucosus, albidus, KHO non reagens.

Prov. Kōzuke (325). Ad corticem arboris. Collegit K. TSUNODA.

94. **Rinodina akagiensis** WAIN. (sp. n.).

Thallus sat tenuis, crustaceus, areolatus, areolis dispersis, 0,5–0,3 mm latis, planis aut depressis, fusciscentibus aut cinereo-fusciscentibus, hypothallo indistincto. Apothecia dispersa, lat. 1,2–0,8 mm, adnata, basi constricta, disco plano aut rarius demum depresso-convexo, fusco aut fusco-nigricante, nudo, margine tenui aut sat tenui, integro, cinereo-fusciscente cinerascenteve. Excipulum jodo haud reagens. Hypothecium albidum. Epithecium fusciscentis aut rubricosopallidum, KHO non reagens. Sporæ 8-næ, distichæ, intense nigræ, ellipsoideæ aut oblongæ, apicibus obtusis, rectæ aut curvatæ, raro leviter constrictæ, long. 0,030–0,034, crass. 0,012–0,016 mm (sec. cel. YASUDAM long. 0,034–0,040, crass. 0,016–0,018 mm), membrana inæqualiter incrassata, septo tenui. Facie externa *R. homobolam* (NYL.) in memoriam revocans.

Prov. Kōzuke, mons Akagi (348). Ad corticem arboris.

95. **Buellia Yasudæ** WAIN. Lich. Jap. (1918) p. 4.

Thallus KHO demum leviter flavescens. Sporæ long. 0,011, crass. 0,004 mm, 3-septatæ.

Prov. Awaji (310). Ad corticem arboris. Collegit S. MATSUZAWA.

Lichenes ab A. Yasuda in Japonia collecti. Continuatio I.

Scriptis

Dr. Edv. A. Wainio.

96. *Buellia squamoso-areolata* WAIN. (sp. n.).

Thallus sat crassus, primum rimosus, demum areolato-diffractus, areolis parce crenulatis, fere squamæformibus, lævigatis, cinereis, opacis. Apothecia dispersa, lat. 1,2–0,6 mm, tenuia, basi tota adnata, disco plano aut vulgo demum depresso-convexo, atro, margine tenuissimo. Perithecium, hypothecium et epithecium fusconigra. Paraphyses apice capitato-clavatæ. Sporæ 8-næ, nigricantes, ellipsoideæ, haud aut leviter constrictæ, 1 septatæ, long. 0,012–0,014, crass. 0,0065–0,008 mm, membrana æqualiter incrassata.

Prov. Kōzuke (330). In rupe.

97. *Buellia æthalea* (ACH.) TH. FR. var. *atroalbella* (NYL.) WAIN. *Lecidea atroalba* FLOT. var. *atroalbella* NYL. Bot. Not. 1853 p. 6, 97.

Prov. Kōzuke, mons Nabewari (274). In rupe.

98. *Buellia placodiospora* WAIN. (sp. n.).

Thallus crustaceus, uniformis, modice incrassatus, continuus, lævigatus, stramineo-flavescens, KHO superne flavescens, addito CaCl_2O_2 lutescens, hypothallo indistincto. Apothecia adnata, lat. 0,7–0,6 mm, basi leviter constricta, disco plano, nigro, nudo, margine tenui, nigro, persistente. "Sporæ ellipsoideæ, long. 0,011–0,014, crass. 0,006–0,007 mm, septo crasso, poro instructo" (sec. cel. YASUDAM). Habitu similis *B. Glaziouanæ* (KREMPELH.) WAIN., sporis et reactione thalli ab ea differens.

Prov. Kōzuke (326). In rupe.

99. *Peltigera polydactyla* (NECK.) HOFFM.

Prov. Rikuzen, Sendai (363).

100. *Peltigera horizontalis* (L.) HOFFM.

Prov. Ishikari, Asahigawa (219).

101. *Pseudocyphellaria aurata* (ACH.) WAIN.

Prov. Rikuzen, Gamō (147). Ad corticem *Pini Thunbergii*.

102. *Sticta Yasudæ* WAIN. (sp. n.).

Thallus crebre laciniatus lobatusque, laciniis circ. 12-4 mm latis, sat lævigatis, superne impure albido-pallescentis aut dilute cinereo-pallescentis, KHO addito CaCl_2O_2 lutescentis, subtus nigricans aut partim ambitum versus pallescens, tomento rhizineo brevi, crebro, concolore, passim evanescente, cyphellis 0,3-1 mm latis. Apothecia supra thallum sparsa, lat. 3,5-2,5 mm, disco fusco, excipulo verruculoso, haud tomentoso, gonidia continente. Sporæ fusiformes, apicibus obtusis, decolores aut pallidæ, long. circ. 0,060, crass. 0,0045 mm. Gonidia pleuococcacea, diam. 0,010-0,006 mm. Affinis *St. subcoriaceæ* NYL., quæ thallo subtus pallescente et reactione ab ea differt.

Prov. Inaba, mons Nagi (148). Ad corticem arboris.

103. *Sticta stenoloba* (NYL.) WAIN. *St. flicina* var. *stenoloba* NYL. Consp. Stict. p. 5, excl. specim. n. 33804 in herb. NYL., a KARSTEN lect., quod nominetur *St. Karsteni* WAIN., thallo instructa subtus obscurato, tomento concolore, crebro instructo, margine ciliato, ciliis 0,5-1 mm longis, nigris, cyphellis 0,8-0,4 mm latis.

Prov. Kii, Nachi (192).

104. *Lobaria erosa* (ESCHW.) FORSELL.

Thallus superne glaber, haud araneoso-pubescentis. Apothecia margine denticulato, excipulo subtus verruculoso, quibus notis a *L. quercizante* MICHAUX (secund. specim. orig. in herb. ACH.) differt.

Prov. Kii (215). Ad corticem arboris.

105. *Lobaria crassior* WAIN. (sp. n.).

A *L. tenui* WAIN. thallo differt crassiore, subtus nigricante aut ad ambitum pallido, rhizinis concoloribus, crebris, superne glaucescente aut olivaceo-glaucescente, demum margine et partim etiam lamina lacinulato-isidioso, intus KHO (CaCl_2O_2) dilute rubescente.

Prov. Inaba, mons Sensoku (149). In rupe.

106. *Parmeliella leptophylla* WAIN. (sp. n.).

Thallus cinereo-nigricans, laciniis brevibus, 0,120-0,070 mm latis. Gonidia æruginosa. Apothecia dispersa, lat. 2-0,7 mm, disco plano aut demum depresso-convexo, testaceopallido, margine tenui, concolore integro. Sporæ (sec. cel. YASUDAM) fusiformi-oblongæ, apicibus obtusis, decolores, simplices, long. 0,025-0,030, crass. 0,009-0,010 mm. Hypothallus indistinctus. Comparabilis cum *P. crossophylla* TUCK.

Prov. Hizen, mons Unzen (365). Ad terram nudam.

107. *Coccocarpia pellita* (ACH.) WAIN. var. *parmelioides* (HOOK.)

MÜLL. ARG.

Prov. Inaba (129). Ad corticem arboris.

108. *Leptogium caesium* (ACH.) WAIN.

Prov. Hizen, Nagasaki (362). Ad corticem arboris.

109. *Collema nigrescens* (LEERS) WAIN. Étud. Lich. Brés. I (1890) p. 235.

Prov. Harima (217). Fert. Ad corticem arboris.

110. *Cladonia rangiferina* (L.) WEB.

Prov. Mino (203).

111. *Cladonia peltastica* NYL. var. *verruculifera* WAIN.

Podetia (in hoc specimine) long. 60 mm, basin versus crass. 2-1,5 mm, impure albida, KHO non reagentia, crebre dichotome ramosa, inter verruculas gonidiosas crebras semipellucida, apicibus haud nutantibus, axillis clausis. Ster. Non sit *Cl. pycnocladæ*, at *Cl. peltasticæ* affinis et forsan ejus variatio.

Prov. Kōzuke, mons Kasadake (204).

112. *Cladonia granulans* WAIN. (sp. n.).

Thallus primarius squamis brevissimis, long. et lat. 0,2-1,5 mm, cuneatis. Podetia long. circ. 10-30 mm, primum basi corticata, demum tota decorticata, crebre verruculoso-granulosa, verruculis sæpe demum in squamulas 0,2-0,3 mm longas excrecentibus, tubæformia, scyphifera, basi 2-1 mm crassa, scyphis circ. 5-2 mm latis, clausis, demum proliferationibus marginalibus 2-1 (-4) item scyphiferis instructis, tabulatis 2-3, tabulato infimo 10-15 mm alto, stramineo-glauescentia, KHO non reagentia. Pycnoconidangia in margine scyphyrorum sita, papillæformia, minuta, fuscescentia, ad ostiolum coccinea. Apothecia haud visa, sine dubio coccinea. Proxima *Cl. coralliferæ* f. *Kunzeanæ*, at haud distincte soresiosa.

Prov. Rikuzen, mons Katta (124). Ad terram nudam.

113. *Cladonia bellidiflora* (ACH.) SCHÆR. f. *Hookeri* (TUCK.)

NYL.

Proxima *Cl. transcendentis* WAIN., sed haud granulosa.

Prov. Rikuchū, mons Sukawa (123). Ad terram nudam.

114. *Cladonia furcata* (HUDS.) SCHRAD. var. *racemosa* (HOFFM.)

FLOERK.

Prov. Kōzuke (125).

115. *Cladonia crispata* (ACH.) FLOT.

Prov. Ishikari, mons Daisetsu (206). Ad terram.

116. **Cladonia squamosa** (Scop.) Hoffm.
Prov. Ishikari, mons Ashibetsu (199). Ad terram.
117. **Cladonia gracilis** (L.) Willd. var. **elongata** (Jacq.) Floerk.
Prov. Shinano, mons Yatsugatake (122).
118. **Cladonia pyxidata** (L.) Fr. var. **neglecta** (Floerk.) Mass.
Prov. Inaba (128). Ad terram.
119. **Cladonia fimbriata** (L.) Fr. f. **simplex** (Weis) Flot.
Prov. Hōki, mons Daisen (120).
Var. **coniocræa** (Floerk.) Wain.
Prov. Yamato, mons Yoshino (119).
Var. **ochrochlora** (Floerk.) Wain.
Prov. Rikuchū (126). Prov. Harima (127).
120. **Cladonia pityrea** (Floerk.) Fr.
Prov. Kōzuke (121). Prov. Iwashiro, mons Iide (200).
121. **Cladonia degenerans** (Floerk.) Spreng.
Prov. Kaga, mons Hakusan (118).
122. ***Cladonia carneola** Fr. ***Cl. bacilliformis** (Nyl.) Wain.
Prov. Shinano, mons Yatsugatake (117).
123. ***Cladonia cyanipes** (Sommerf.) Wain.
Prov. Ishikari, mons Jūbari (202).
124. **Lecidea (Lopadium) ferruginea** (Müll. Arg.) Wain. *Lopadium ferrugineum* Müll. Arg. Lich. Miyosh. Jap. (1891) p. 127.
Prov. Rikuzen, Sendai (63). Prov. Kōzuke (194). Ad corticem *Abietis firmæ*.
125. **Lecidea (Bacidia) myricicola** Wain. (sp. n.).
Thallus squamulosus, squamulis parvis, adpressis, contiguis, laceratis aut anguste laciniatis, superne cinereo-glauciscentibus, hypothallo indistincto. Apothecia dispersa aut parce conferta, lat. 1,2-0,5 mm, basi bene constricta, disco primum plano, demum depresso-convexo, testaceo-rufescente, nudo, margine tenui, concolore, integro, haud prominente, subpersistente. Hypothecium pallidum. "Sporæ aciculares, decolores, long. 0,028-0,037, crass. 0,002 mm" (sec. cel. Yasudam).
Prov. Kii (309). Ad corticem *Myricæ rubræ*. Collegit N. Ue.
126. **Lecidea (Bilimbia) akagiensis** Wain. (sp. n.).
Thallus crustaceus, sat tenuis, irregulariter diffractus, leviter verruculoso-inæqualis, obscure cinereo-glauciscentibus, hypothallo indistincto. Apothecia sat crebra, lat. 0,5-0,35 mm, disco primum plano, dein mox convexo, nigricante vel sublivido nigricante, margine tenui, integro, haud prominente, pallido, testaceo aut rarius albido, mox

excluso. Perithecium intus sat dilute violaceo-purpureum, extus decoloratum. Hypothecium albidum, versus marginem partim sat dilute violaceo-purpureum. Hymenium superius sordide purpureum, jodo cærulescens. Paraphyses simplices, sat crebre septatae, crass. 0,002 mm, apice leviter incrassatae. Hymenium 0,060-0,080 mm crassum. Sporae decolores, fusiformi-oblongae, apicibus obtusis, 3-septatae, long. 0,016-0,024, crass. 0,004-0,005 mm. Proxima est *L. chlorococcæ* GRÆVE.

Prov. Kōzuke, mons Akagi (337). Ad corticem arboris.

127. *Lecidea* (*Psorothecium*) *submarginiflexa* WAIN. (sp. n.).

Thallo verruculis insperso et simul soredioso a *L. marginiflexa* TAYL. differens. "Sporae decolores, 1-septatae, long. 0,085-0,090, crass. 0,030-0,037 mm, membrana incrassata" (sec. cel. YASUDAM). Discus niger.

Prov. Inaba, mons Sankaku (161). Ad corticem *Pruni yedoensis*.

128. *Lecidea* (*Psora*) *luridopallens* WAIN. (sp. n.).

Thallus squamulosus, squamulis circ. 1-0,7 mm longis, imbricatis, irregulariter laciniatis, laciniis saepe sublinearibus, circ. 0,15 mm latis, superne lurido-glauescens, isidiis destitutus, hypothallo indistincto. Apothecia sat crebra aut parce confluentia, lat. 1-0,6 mm, basi leviter constricta, disco pallido, depresso-convexo, margine tenui, integro, concolore, demum excluso. Epithecium fere decoloratum. Hypothecium decoloratum aut pallidum. Perithecium extus pallidum, intus decoloratum. Hymenium jodo cærulescens. Paraphyses arcte cohærentes. Sporae 8-nae, distichae, decolores, oblongae aut ellipsoideae, simplices, long. 0,014-0,010, crass. 0,007-0,005 mm.

Prov. Kōzuke, mons Akagi (167). Ad corticem arboris.

129. *Lecidea* (*Psora*) *kiiensis* WAIN. (sp. n.).

Thallus squamulosus, squamulis circ. 1 mm longis latisque, adpressis, margine crenulatis et demum isidiosis, isidiis cylindricis, 0,8-0,5 mm longis, tenuibus, superne cinereo-glauescens. Apothecia sat crebra, lat. 0,3-0,2 mm, basi constricta, disco pallido testaceove, margine tenui, concolore, integro. Perithecium et hypothecium pallidum. Hymenium praesertimque superius rubricoso-rufescens. Affinis *L. javanicae* SCHÆR. (in MORITZ. Syst. Verzeichn. p. 128), quae apotheciis majoribus, paullo obscurioribus et thallo pallido (item isidioso) ab ea differt.

Prov. Kii (268). Ad corticem *Ilicis rotundæ* THUNB.

130. *Lecidea* (*Psora*) *densifloræ* WAIN. (sp. n.).

Thallus subsquamuloso-granulosus, granulis contiguis, subglobosis

et diam. circ. 0,1 mm, partim squamulæformi-applanatis et paullo longioribus, olivaceo-glauciscentibus, hypothallo indistincto. Apothecia 2,5-0,5 mm lata, demum interdum difformia, disco plano, rufescente aut testaceo, margine tenui, subconcolore, integro aut subflexuoso. Perithecium subtus hyphis hypothallinis albidis 0,004-0,002 mm crassis instructum. Hypothecium fulvescens, KHO fulvo-rubricosum. Hymenium totum aut epithecium fulvescens pallidumve. Sporæ 8-næ, distichæ, decolores, subfusiformes oblongæve, apicibus obtusis, simplices, long. 0,011-0,008, crass. 0,002-0,0015 mm.

Prov. Kōzuke (350). Ad corticem *Pini densifloræ*.

131. **Lecidea (Biatora) ocellaris** WAIN. (sp. n.).

Thallus sat tenuis, verruculoso-inæqualis, albedo-cinerascens, KHO non reagens, hypothallo obscurato partim limitatus. Apothecia sat crebra aut sparsa, late adnata, basi leviter constricta, lat. 0,6-0,3 (-1) mm, disco depresso-convexo, raro demum subtuberculoso, nigricante, nudo, opaco, margine indistincto exclusoque. Perithecium decoloratum, chondroideum. Hypothecium sordide pallidum aut dilute fuscescens, KHO non reagens, hyphis erectis. Hymenium circ. 0,030 mm crassum, jodo leviter cærulescens, dein vinose rubens. Hymenium superius æruginosum, KHO dilutescens. Paraphyses ramoso-connexæ, membranis incrassatis, in KHO gelatino-turgescentibus. Sporæ 8 næ, decolores, simplices, oblongæ, long. 0,012-0,011, crass. 0,0035-0,003 mm. Forsan est variatio *L. subglobosæ* (*L. ocelliformis* NYL.).

Prov. Kōzuke (327). Ad corticem arboris.

132. **Lecidea (Biatora) declinella** WAIN. (sp. n.).

Thallus modice incrassatus aut sat tenuis, cinerascens, verruculis crebris, at haud contiguis, intus albis inspersus, hypothallo indistincto. Apothecia sat dispersa, lat. 1 (1,2-0,8) mm, adnata, basi constricta, disco primum plano, demum depresso-convexo, subcinereo- vel lurido-rufescente, margine sat tenui, cinerascente, integro aut vulgo increbre verruculoso. Hypothecium fusco-nigrum. Perithecium fusco-nigrum, strato tenui subdecolorato obductum. Epithecium dilute testaceum aut pallidum. Sporæ 8-næ, distichæ, decolores, simplices, fusiformi-oblongæ, apicibus obtusis, long. 0,014, crass. 0,006 mm. Proxima *L. declinandæ* NYL. (Lich. Nov. Zel. p. 146), quæ verruculis thalli contiguis ab ea differt. Affines etiam sunt *L. polycampia* TUCK., *L. remota* FÉE et *L. leucotropa* (NYL.).

Prov. Iyo (163). Ad corticem arboris.

133. **Lecidea (Eulecidea) olivacea** (HOFFM.) MASS. var. **euphoreoides** WAIN. Lich. Caucas. p. 326, Lich. Jap. (1918) p. 7.

Prov. Kōzuke (196). Ad corticem arboris. Collegit K. TSUNODA.
Var. *cæsitia* WAIN.

Habitu similis *Buelliae disciformi*. Thallus modice incrassatus, verruculoso-inæqualis, cæsius, KHO flavescens, addito CaCl_2O_2 punctis rubescentibus. Apothecia planiuscula, lat. 1,5-0,7 mm. Hypothecium violaceo-rubescens. Epithecium æruginoso-fuligineum. Sporæ decolores, simplices, long. circ. 0,012-0,008, crass. 0,008-0,005 mm.

Prov. Kushiro, Akkeshi (334). Ad corticem arboris.

134. *Acarospora fuscata* (SCHRAD.) ARN. var. *smaragdula* (WAHLENB.) WAIN.

Prov. Kōzuke (273). In rupe.

135. *Sarcogyne zeorina* WAIN. (sp. n.).

Thallus modice incrassatus, continuus, lævigatus, albido-glauescens, hypothallo nigricante limitatus. Apothecia crebra, thallo immersa, leviter emergentia, aspicilioidea, disco plano, livido-pruinoso, opaco, circ. 1-0,7 mm lato, margine thallode sat tenui, integro, thallum demum leviter superante, basi laud constricto, margine proprio tenui, nigricante, demum distincto. Hypothecium fuscum, KHO sordide violaceum. Perithecium fusco-fuligineum. Hymenium circ. 0,110 mm crassum, jodo cærulescens. Epithecium fuscescens. Paraphyses arcte cohærentes, simplices, crass. 0,001 mm, gelatinam sat abundantem percurrentes. Asci clavati. Sporæ numerosissimæ, globosæ, diam. 0,002-0,003 mm (haud bene evolutæ).

Prov. Kōzuke (304). In rupe.

136. *Lecanactis subfarinosa* (KNIGHT) WAIN. (*Lecidea* NYL. Lich. Nov. Zel. p. 110, *Opegrapha* MÜLL. ARG. Consp. Lich. Nov. Zel. p. 78).

Prov. Awa, mons Kiyosumi (239). Ad corticem arboris.

137. *Lecanactis Nakajii* WAIN. et YASUDA (sp. n.).

Thallus sat crassus, inæqualis, subleprosus (cum thallo alieno mixtus), glaucescens, hypothallo indistincto. Gonidia ad *Trentepohliam* pertinentia. Apothecia dispersa, 2-0,8 mm lata, late adnata, basi leviter constricta, disco plano, fusco-nigricante, nudo, margine modice incrassato, integro, nigro, leviter prominente. Perithecium fuscescens. Hypothecium dilute fuscescens, tenue. Hymenium circ. 0,140 mm crassum, jodo cærulescens. Epithecium rubricoso-rufescens fuscescensve. Paraphyses increbre ramoso-connexæ. Sporæ 8-næ, decolores, oblongæ, 3-7-septatæ, "long. 0,028-0,035, crass. 0,010-0,012 mm" (sec. cel. YASUDAM).

Prov. Hōki, Yonago (162). In rupe. Collegit M. NAKAJI.

138. **Lecanactis scotomma** (NYL.) WAIN. (*Lecidea scotomma* NYL. Lich. Jap. p. 75).

Prov. Inaba (168). In rupe.—Gonidia ad *Trentepohliam* pertinentia, cellulis concatenatis, 0,008–0,010 mm crassis. Paraphyses increbre ramoso-connexæ.

139. **Lecanactis scotommodes** WAIN. (sp. n.).

Thallus sat tenuis, verruculoso-inæqualis, albido-cinereascens. Gonidia ad *Trentepohliam* pertinentia, cellulis concatenatis, 0,010–0,012 mm crassis. Apothecia crebra, late adnata, basi parum aut leviter constricta, 1,3–0,6 mm lata, disco plano, nigro, nudo, margine tenui, integro, parum prominente, nigro. Perithecium et hypothecium intense rubrico-rufescentia. Epithecium rubricosco-rufescens. Hymenium circ. 0,080 mm crassum, jodo cærulescens. Paraphyses apices versus ramoso-connexæ. Sporæ 8-næ, fusiformes aut oblongæ, apicibus obtusis aut rotundatis, 3-septatæ, “long. 0,020–0,022, crass. 0,007–0,008 mm” sec. cel. YASUDAM.—Apotheciis minoribus, margine tenuiore et thallo a specie præcedente differt.

Prov. Kōzuke (166). In rupe.

140. **Lecanactis illecebrosa** (DUF.) FR. Lich. Eur. Ref. p. 376 p.p. (sec. herb. NYL.).

Thallus KHO addito CaCl_2O_2 non reagens. Apothecia cinereo-aut livido-pruinosa aut denudata nigraque. Paraphyses ramoso-connexæ. Gonidia ad *Trentepohliam* pertinentia, cellulis 0,010–0,014 mm crassis, concatenatis.

Prov. Rikuzen, Matsushima (311). In rupe.

141. **Diploschistes actinostoma** (PERS.) ZAHLBR. var. **prominens** WAIN.

Apothecia margine ostiolarum leviter prominente.—Thallus areolatus, lævigatus, pallido- et cinerescenti-variegatus. Medulla jodo cærulescens et CaCl_2O_2 rubescens. Sporæ nigricantes.

Prov. Kōzuke, mons Nabewari (282). In rupe.

142. **Diploschistes cæsioplumbea** (NYL.) WAIN. *Urceolaria actinostoma* var. *cæsioplumbea* NYL. (Pyr. Or. p. 11, 35, ed. 2 1891, p. 62), cujus thallus sat lævigatus, medulla jodo cærulescens et KHO addito CaCl_2O_2 rubescens.

Var. **plumbea** WAIN.

Thallus crassus, areolatus, areolis cinereis, subnitidis, convexus, rugoso-inæqualibus. Medulla jodo dilute cærulescens (parte infima), CaCl_2O_2 solo et addito KHO rubescens. Sporæ nigricantes, murales.

Prov. Kōzuke (300). In rupe.

143. *Diploschistes anactina* (NYL.) WAIN.

Thallus nec CaCl_2O_2 , nec addito KHO reagens. Medulla jodo leviter cærulescens. Sporæ nigricantes, murales, long. 0,018-0,030, crass. 0,009-0,015 mm.

Prov. Kōzuke (319). In rupe.

144. *Thelotrema* (*Leptotrema*) *desquamescens* WAIN. (sp. n.).

Thallus crassus, laxè affixus et facile desquamescens, glaucescens aut partim lividus, nec KHO, nec jodo reagens. Apothecia thallo immersa, disco 1-0,2 mm lato, impresso, livido-cæsiò. Perithecium albidum pallidumve aut superne fusco-nigrum, columella nulla. Sporæ 8-næ, distichæ, fuscescentes, submurales, septis transversis 3, loculis mediis uno septo obliquo divisis, loculis apicalibus minutis, ellipsoideæ, long. 0,014-0,020, crass. 0,009-0,012 mm.

Prov. Inaba (170, 171). Ad corticem arboris.

145. *Thelotrema* (*Ocellularia*) *bicavatum* NYL.

Prov. Kōzuke, mons Akagi (98), in prov. Kōzuke etiam n. 226. Prov. Kii (227). Ad *Myrsinem capitellatam* aliasque arbores.

146. *Graphis* (*Phæographis*) *diversa* NYL. Exp. Cal. (1861) p. 50, Syn. Cal. (1868) p. 74.

Prov. Harima (243). Ad corticem arboris.

147. *Graphis* (*Phæographis*) *iyōensis* WAIN. (sp. n.).

Thallus sat tenuis, lævigatus, cinereo-glaucescens, KHO non reagens. Apothecia partim crebre approximata, leviter prominentia, long. 5-1 mm, lat. 0,4 mm, sat recta aut rarius curvata, simplicia aut 1-2 ramis instructa, disco plano, nigro, nudo, aperto, margine thallino, sat tenui, discum haud superantè, lævigato, basi prærupto. Perithecium fusco-fuligineum, integrum, latere 0,060 mm crassum, basi 0,060-0,040 mm, labiis apertis (sect. *Melanobasis*). Epithecium fuscescens. Sporæ 8-næ, fuscescentes, elongatæ, septis transversis 7-6, loculis lenticularibus, long. 0,024-0,042, crass. 0,010-0,007 mm. Apotheciis angustioribus a *Gr. planiuscula* MONT. differt et intermedia est inter eam et *Gr. madagascariensem* (MÜLL. ARG.).

Prov. Iyo (184). Ad corticem arboris.

148. *Graphis* (*Phæographis*) *Pasanix* WAIN. (sp. n.).

Thallus tenuis, sat lævigatus, subcinereo-glaucescens, KHO parum reagens. Apothecia vulgo radiato-aggregata et radiato-ramosa, leviter vel levissime prominentia, long. 5-1,5, lat. 0,1-0,15 mm, sæpe flexuosa curvatave, subdendroideo- aut radiato-ramosa, disco rimæformi, tenuissime cæsiò-pruinoso aut inconspicuo, labiis conniventibus, clausis aut anguste hiantibus. Perithecium fuscorubricosum-fuligineum, integrum,

sat crassum, labiis superne anguste denudatis, tenuissime cæsiopruinosi, lævigatis, lateribus amphithecio thallino tenui obductis. Epithecium dilute fuscescens. Sporæ 8-næ, obscuratis, oblongæ, septis transversis 7, long. 0,018, crass. 0,007 mm.

Prov. Kii (244). Ad *Pasaniam cuspidatam*.

149. **Graphis (Phæographis) kiiensis** WAIN. (sp. n.).

Thallus sat tenuis, leviter verruculoso-inæqualis, pallido-glaucescens, KHO non reagens. Apothecia dispersa, thallo immersa, long. 5-1,5, lat. 0,1 mm, flexuosa curvatave, subdendroideo vel radiato-ramosa, disco angustissimo, concavo, livido aut nigricante, subnudo, labiis hiantibus apertisve, tenuibus, lævigatis, nigricantibus nudisque aut subpruinosis. Perithecium fusco- aut subrubricosofulgineum, dimidiatum, basi deficiens. Hymenium resinoso-guttulosum, totum sordidum. Sporæ 8-næ, distichæ, obscuratæ, oblongæ, apicibus rotundatis obtusisve, septis transversis 7-3, long. 0,016-0,012, crass. 0,006-0,005 mm. Facie externa *Gr. Pasaniæ* subsimilis, at ei haud affinis.

Prov. Kii (254). Ad corticem arboris.

150. **Graphis (Scolæcospora) awaënsis** WAIN. (sp. n.).

Thallus modice incrassatus, sat lævigatus, glaucescens. Apothecia sat dispersa, modice prominentia, long. 5-2, lat. 0,6-0,8 mm, flexuosa curvatave, simplicia aut raro parce ramosa, disco rimæformi, labiis clausis. Perithecium fulgineum, KHO rubricosofulgineum, dimidiatum, basi deficiens, amphithecio thallino sat crasso obductum, labiis superne anguste denudatis nigrisque, lævigatis. Epithecium dilute fuscescens. Sporæ 8-næ, polystichæ, decolores, jodo violascentes, fusiformes, leviter curvatæ, apicibus obtusis, septis transversis 16-11, long. 0,040-0,072, crass. 0,010-0,012 mm. Habitu similis *Gr. dissidenti* NYL. (*Gr. scaphellæ* FÉE, haud ACH.), at sporis ab ea differens et affinis *Gr. longirameæ* MÜLL. ARG.

Prov. Awa, mons Kiyosumi (251). Ad corticem arboris.

151. **Graphis (Scolæcospora) batanensis** WAIN. (Lich. Philipp. III).

Var. **rikuzensis** WAIN.

A var. typica in insulis Batanis collecta differt labiis perithecii vertice denudatis, nec amphithecio thallino tenui omnino obductis. Sporæ decolores, 7-septatæ, long. circ. 0,020 mm. Apothecia thallo immersa, flexuosa curvatave, vulgo ramosa, long. 6-0,5, lat. 0,25-0,2 mm, labiis conniventibus aut anguste hiantibus, lævigatis.

Prov. Rikuzen, Gamō (250). Ad corticem arboris.

152. **Graphis (Scolæcospora) scripta** (L.) ACH.

Prov. Kōzuke (246, 252). Ad corticem arboris.

153. **Graphis (Scolæcospora) prunicola** WAIN. (sp. n.).

Affinis *Gr. scriptæ*, sed apotheciis prominentibus, nec immersis. Habitu similis *Gr. duplicatæ* ACH., at labiis lævigatis, omnino nudis aut basi angustissime thallino-obductis. Thallus tenuis, lævigatus, albidus, KHO non reagens. Apothecia long. circ. 7-1 mm, lat. 0,220 mm, sæpe sat recta, simplicia aut leviter ramosa. Perithecium fuligineum, basi tenue aut medio anguste deficiens, labiis anguste hiantibus. Sporæ decolores, 5-septatæ, jodo leviter cærulescentes, long. 0,016, crass. 0,007-0,006 mm.

Prov. Inaba (182). Ad corticem *Pruni yedoensis*.

154. **Graphis (Scolæcospora) vicarians** WAIN. (sp. n.).

Thallus tenuissimus, macula cinereo-pallescente indicatus, hypothallo indistincto. Apothecia partim dispersa, prominentia, long. 5-1, lat. 0,8-0,7 mm, vulgo flexuosa curvatave, simplicia aut rarius parce breviterque ramosa, disco aperto, plano, cæsio-pruinoso, marginata, margine modice incrassato, zeorino, discum parum superante. Perithecium fuligineum, crassum, integrum, amphithecio thallino, basi leviter constricto, fere totum obductum. Epithecium fuscescens. Hymenium cinerascens, guttulas resinosas crebre continens. Sporæ 8-næ, distichæ, decolores, oblongæ, apicibus obtusis, 3-septatæ, loculis apicalibus multo longioribus, strato gelatinoso indutæ, long. 0,021-0,024, crass. 0,008-0,009 mm (strato gelatinoso non computato). Ad sectionem *Phanerographam* MÜLL ARG. pertinet. Habitu similis *Gr. diversæ*.

Prov. Rikuzen, Sendai (253). Ad corticem *Quercus glanduliferæ*.

155. **Graphis (Glyphis) cicatricosa** (ACH.) WAIN.

Prov. Kii (221). Ad corticem arboris.

156. **Chiodecton (Pycnothallus) ocellulatum** WAIN. (sp. n.).

Thallus sat tenuis, verruculoso-inæqualis, crebre contextus, albidus vel cinerascens, hypothallo indistincto. Apothecia sat crebre, adpressa, rotundata, lat. 0,6-0,4, crass. 0,270 mm, disco nigro aut fuscescente, nudo aut rarius tenuiter pruinoso, plano, margine tenui, integro, thallo concolore, interdum zeorino, discum haud superante, basi leviter constricto. Hypothecium crassum, sordide violaceum. Parathecium fuscofuligineum, crassum. Amphithecium crebre contextum. Hymenium superius sordide violaceum. Paraphyses parce ramoso-connexæ. Sporæ 8-næ, decolores, fusiformes, apicibus obtusis, rectæ aut leviter curvatæ, 3-septatæ, long. 0,023-0,029, crass. 0,004-0,005 mm. Gonidia ad *Trentepohliam* pertinentia, cellulis 0,014-0,026 mm latis,

anguloso-subglobosis, concatenatis, membrana modice incrassata. Ch. (*Platygraphum*) *congruentem* NYL. habitu in memoriam revocans.

Prov. Kōzuke (154). Ad corticem *Castaneae pubinervis*.

157. *Arthonia* (*Allarthothelium*) *collospora* WAIN. (sp. n.).

Thallus tenuis, lævigatus, albidus. Apothecia partim sat crebra, parum prominentia, rotundata aut difformia, diam. 0,3–0,2 mm aut long. 0,35 et lat. 0,3–0,15 mm, haud ramosa, nigricantia aut rarius fusciscentia, haud pruinosa. Hypothecium decoloratum. Epithecium cæruleo-fusciscentis. Sporæ 8-næ, decolores, ovoideo-oblongæ, apicibus rotundatis aut altero apice rotundato-obtuso, medio sæpe leviter constrictæ, murales, seriebus cellularum circ. 11, "long. 0,033–0,043, crass. 0,013–0,018 mm" (sec. cel. YASUDAM), strato gelatinoso indutæ. Asci clavati, long. circ. 0,100, crass. 0,044 mm. Hypothecium et Hymenium jodo cærulescens, ascis sporisque et strato gelatinoso sporarum rubescentes. Gonidia simplicia, globosa, diam. 0,012–0,014 mm, protococcacea. A. *tædiosæ* NYL. habitu similis, at in ea sporæ haud gelatinosæ.

Prov. Kōzuke (222). Ad corticem *Alni japonicæ*.

158. *Arthonia* (*Arthothelium*) *spectabilis* FLOR.

Sporæ 8-næ, fusciscentes, murales, long. 0,034–0,022, crass. 0,016–0,012 mm. Thallus jodo cærulescens. Gonidia ad *Trentepohliam* pertinentia.

Prov. Kōzuke (306). Ad corticem arboris.

159. *Arthonia* (*Arthothelium*) *pertenera* WAIN. (sp. n.).

Thallus tenuis, macula stramineo-pallida indicatus. Apothecia partim aggregata, rotundata aut difformia, diam. 0,1–0,15 mm, raro long. 0,5 mm, simplicia aut raro parce ramosa, nigra, nuda, haud prominentia. Hypothecium dilute fusciscentis. Epithecium fuscofuliginum, KHO non reagens. Asci diam. circ. 0,022 mm. Sporæ 8-næ, fusco-nigricantes, ovoideo-oblongæ, apicibus rotundatis aut raro altero apice obtuso, submurales, septis transversis 5, rarius oculis 2–1 mediis septo longitudinali divisus, long. 0,020–0,016, crass. 0,007 mm. Gonidia ad *Trentepohliam* pertinentia, cellulis anguloso-globosis, concatenatis, 0,012–0,006 mm crassis. *Arthoniæ abnormi* (WILLEY Mon. Arth. p. 53) habitu similis.

Prov. Kazusa (223). Ad corticem arboris.

160. *Sphærophorus compressus* (ACH.) KOERB.

Prov. Shinano, mons. Shirouma (133). Prov. Kii (188).

161. *Sphærophorus meiophorus* (NYL.) WAIN. (NYL. Lich. Jap. p. 16).

Prov. Shinano, mons Yatsugatake (255). Ad corticem arboris.
—Medulla jodo non reagens.

162. *Sphærophorus diplotypus* WAIN. in Hedwigia 1898 p. 36.

Prov. Kii, mons Nachi (205). Ad truncos arborum.

163. *Pyrenastrum tokyense* MÜLL. ARG. Lich. YATAB. Jap. (N. G. Bot. Ital. 1892) p. 202.

Thallus tenuis, macula pallida aut cinerascens indicatus, hypothallo indistincto. Apothecia thallo substratoque immersa, nucleos 7–2 collo oblique conniventes confluentesque continentia, collo ostiolarum communi in verrucula 0,15–0,2 mm lata parum prominente aperientia. Perithecium fusco-fuliginosum, integrum, lat. 0,5–0,3 mm. Paraphyses simplices. Asci anguste fusiformes, long. 0,100, crass. 0,010 mm. Sporae 8-næ, olivaceo-fusiformes, apicibus acutis, 10–11-septatae, loculis lenticularibus aut cylindricis, endosporio incrassato, long. circ. 0,044, sec. cel. YASUDAM "long. 0,065–0,080, crass. 0,004–0,005 mm."

Prov. Kōzuke (270). Ad corticem *Alni japonicæ*.

164. *Thelenella cervina* WAIN. (sp. n.).

Thallus modice incrassatus, rimulosus, lævigatus, cinereo-fuscescens, opacus. Apothecia crebra, semiimmersa, verrucas formantia 0,35–0,25 mm latas, hemisphaericas, nigricantes, nudas, vertice leviter impresso, ostiolo sæpe albido. Perithecium fusconigrum, integrum. Paraphyses numerosae. Paraphyses ramoso-connexae. Asci subcylindrici. Sporae 8-næ, distichae, decolores, fusiformes aut oblongae vel ovoideo-oblongae, apicibus obtusis aut rotundatis, murales, septis transversis 5, long. 0,020–0,016, crass. 0,010–0,008 mm. Gonidia pleurococcacea.

Prov. Kōzuke (345). In rupe.

165. *Mycoglæna Yasudæ* WAIN. (sp. n.).

Ad *Fungos* pertinens, gonidiis destituta et affinis *M. caerulescenti* (NYL.) v. *Höhnelt*. Thallus macula albida indicatus. Perithecium hemisphaericum, lat. 0,25 mm, subcaerulescenti-nigricans, dimidiatum, ostiolo 0,030 mm lato. Nucleus jodo non reagens, metaplasmate ascorum fulvo-rubescens. Paraphyses numerosae, ramoso-connexae. Asci subcylindrici. Sporae 8-næ, distichae aut submonostichae, decolores, oblongae aut ovoideo-oblongae, apicibus rotundatis aut obtusis, murales, septis transversis 5, uno septo longitudinali in paucis loculis, "long. 0,015–0,024, crass. 0,007–0,011 mm" sec. cel. YASUDAM.

Prov. Kōzuke (238). Ad corticem arboris.

166. *Polyblastia japonica* WAIN. et YASUDA (sp. n.).

Thallus tenuis, subgranuloso-inaequalis, impure albidus, hypothallo indistincto. Apothecia numerosa, subdispersa, verrucas formantia

0,35–0,2 mm latas, depressas subapplanatasque, alt. 0,165 mm, nigras, nudas. Nucleus albidus, abundanter resinoso-guttulosus, jodo non reagens, gonidiis hymenialibus nullis. Perithecium fuscofuligineum, dimidiatum, ostiolo minuto, haud faveolato. Paraphyses in gelatinam diffluxæ. Asci subcylindrici. Sporæ 4-næ, primum decolores, demum fusco-nigricantes, murales, ovoideæ aut ellipsoideæ oblongæve, medio vulgo constrictæ, cellulis numerosis, seriebus cellularum transversis 9–6, long. 0,030–0,038 mm, crass. 0,014 mm. Gonidia ad *Pleurococcum* pertinentia, globosa, diam. 0,008–0,014 mm.

Prov. Kōzuke (266). Ad corticem arboris.

167. *Pseudopyrenula cinereoglauescens* WAIN. (sp. n.).

Thallus sat tenuis aut modice incrassatus, lævigatus, cinereo-glauescens. Apothecia sæpe irregulariter aggregata, thallo substratoque immersa, interdum macula cinereo-nigricante, parum prominente aut verruca ostiolarum nigricante, 0,1 mm lato, leviter prominente indicata. Perithecium globosum, fusconigrum, tenue, integrum. Nucleus albidus, jodo non reagens, sporis maturis jodo violascentibus. Paraphyses partim crebre ramoso-connexæ. Asci fusiformes, long. circ. 0,200, crass. 0,024 mm. Sporæ 8-næ, distichæ, decolores, fusiformes, apicibus obtusis, septis 9–11, loculis lenticularibus, long. 0,058–0,074, crass. 0,012–0,014 mm. Affinis *Ps. concatervatæ* (NYL.).

Prov. Kōzuke (197). Ad corticem arboris.

168. *Pseudopyrenula awajiensis* WAIN. (sp. n.).

Thallus sat tenuis, lævigatus, cinero-glauescens. Apothecia sparsa, thallo substratoque immersa, verruculis parum aut leviter prominentibus thallo obductis indicata, ostiolo minutissimo parum conspicuo. Perithecium fusconigrum, integrum. Nucleus albidus, jodo non reagens. Sporæ 8-næ, distichæ, decolores, fusiformes, apicibus obtusis aut sat acutis, jodo violascentes, 3-septatæ, loculis lenticularibus, loculis apicalibus minoribus, long. 0,016–0,019, crass. 0,009 mm. *Ps. catervaria* var. *diffluens* NYL. thallo albido-stramineo ab hac specie differt.

Prov. Awaji (242). Ad corticem arboris.

169. *Porina hypochroa* WAIN. (sp. n.).

Thallus sat tenuis aut modice incrassatus, sat lævigatus, substrato sat laxè affixus desquamescensque, subtus sordide albidus aut demum sordide obscuratus. Apothecia verrucas formantia 1–0,5 mm latas, subhemisphæricas aut parum elevatas, basi vulgo sensim in thallum abeuntes formantia, amphithecio thallino, thallo concolore obducta, vertice 0,1–0,4 mm lato nigricante fuscescenteve, interdum demum

umbonato. Peritheciium superne obscuratum, ceterum pallidum. Sporæ 8-næ, "decolores, fusiformes, 10-11-septatæ, long. 0,095-0,110, crass. 0,017-0,019 mm, membrana incrassta (sec. cel. YASUDAM).

Prov. Harima, mons Kasagata (172). Ad corticem arboris.

170. *Porina internigrans* (NYL. Syn. Lich. Nov. Cal. 1868, p. 84).

Thallus lævigatus. Sporæ 10-5-septatæ, long. 0,062-0,090, crass. 0,008-0,12 mm.—Etiam in specim. orig. sec. annot. NYLANDERI "sporæ 9-10-septatæ, long. 0,060-0,092, crass. 0,014-0,018 mm." Diversa est *P. internigrans* NYL., Lich. Andam. (1874) p. 18, thallo verruculoso-inæquali et sporis 9-septatis instructa, quare nuncupanda est *Porina internigricans* WAIN.

Prov. Kii (275). Ad corticem arboris.

171. *Porina nonaria* NYL. Fl. 1876 p. 365; MÜLL. ARG. Pys. Cub. (1885) p. 401.

Prov. Kii (187). Ad corticem *Myrsinis capitellatæ*.

172. *Anthracotheций olivaceocinereum* WAIN. (sp. n.).

Thallus cinereo-glauescens, sat tenuis, sat lævigatus. Apothecia sat crebra, thallo substratoque immersa, verrucis thallo obductis, parum aut leviter prominentibus indicata, interdum vertice denudato nigricanteque leviter prominente aut margine ostiolari cinereo-nigricante leviter vel parum prominente. Peritheciium globosum, fuscofuligineum, tenue, integrum. Sporæ fuscæ, murales, long. 0,042-0,060, crass. 0,018-0,022 mm (sec. cel. YASUDAM).

Prov. Awaji, mons Mikuma (267). Ad corticem arboris.

173. *Pyrenula (Melanotheca) cruenta* (MONT.) WAIN.

Prov. Kii (186). Ad corticem *Myrsinis capitellatæ*.

174. *Pyrenula (Melanotheca) rubromaculata* WAIN. (sp. n.).

Thallus pallescens, circa nonnulla apothecia anguste rubescens, tenuis, lævigatus, medulla alba. Apothecia (sæpe 2-6) confluentia, verrucas nigras formantia, margine ostiolari vulgo annulum pallidum angustum formante, ostiolo minutissimo, nigro. Peritheciium fuligineum, integrum. Sporæ 8-næ, pallidæ, oblongæ, 3-septatæ, long. 0,025-0,030, crass. 0,012-0,014 mm, strato gelatinoso tenui indutæ.—*Pyrenula subdecolor* (NYL. Lich. Jap. p. 93) ostiolo albido majoreque et margine ostiolari haud albido-annulato ab hac specie differt. *Pyrenula erythrothelia* (NYL. l. c.), thallo intus fulvo instructa, item est autonoma species.

Prov. Kii (259, 262). Ad corticem *Taonabinis japonicæ*.

175. *Pyrenula atroalbella* WAIN. (sp. n.).

Thallus sat tenuis, continuus, lævigatus, albus, opacus. Apothecia thallo substratoque immersa, demum emergentia et verrucas hemisphæricas, 0,3 mm latas, nigricantes nudasque formantia. Sporæ olivaceo-fuscescentes, fusiformes, apicibus obtusis, long. circ. 0,030, crass. 0,009 mm, 5-septatæ. Perithecium fuligineum, integrum, globosum. Specimen haud bene evolutum.

Prov. Awaji, mons Mikuma (260). Ad corticem arboris.

176. **Pyrenula irrubescens** WAIN. (sp. n.).

Thallus sat tenuis, lævigatus, subcinerascenti olivaceo-glauescens, maculis dilute rubricosis inspersus, hypothallo nigricante limitatus. Apothecia dispersa aut partim etiam aggregata, thallo substratoque immersa, apice emergente et verrucam subconoideam, 0,25–0,2 mm latam, vertice anguste nigricantem, basin versus strato thallino obductam formantia, margine ostiolari leviter prominente, nigro, ostiolo minutissimo. Perithecium subglobosum, fuligineum, integrum. Sporæ fuscescentes, 3-septatæ, long. 0,016–0,018, crass. 0,008–0,009 mm (sec. cel. YASUDAM). Forsan affinis *P. cruentæ*, sed apotheciis minoribus, nec confluentibus.

Prov. Kii (265). Ad corticem *Pasanix cuspidatæ*.

177. **Pyrenula stramineoatra** WAIN. (in Lich. Philipp. III) var. **cinereostraminea** WAIN.

Thallus cinerascenti-stramineus, KHO rubricosus-rufescens. Sporæ 3-septatæ, long. 0,018–0,025, crass. 0,006–0,015 mm (sec. YASUDAM).

Prov. Kōzuke (235), mons Akagi (263, 272). Ad corticem arborum.

178. **Pyrenula lævigata** PERS. var. **meizospora** WAIN. Addit. Lich. Antill. (1915) p. 191.

Prov. Awaji, mons Mikuma (158). Ad corticem arboris.

179. **Pyrenula obscurior** WAIN. (sp. n.).

Thallus sat tenuis, lævigatus, fusco-nigricans aut partim obscure cinereo-glauescens. Apothecia dispersa, thallo substratoque immersa, demum verrucas formantia leviter prominentes, 1–0,7 mm latas, latere sensim dilatatas, thallo obductas aut demum margine ostiolari nigricante denudatoque angusto conoideo-prominente, ostiolo minutissimo. Perithecium depresso-subglobosum, fuligineum, integrum. Sporæ (sec. YASUDAM) oblongæ, apicibus rotundatis, fuscescentes, 3-septatæ, long. 0,025–0,028, crass. 0,010–0,012 mm.

Prov. Kōzuke (198). Ad corticem *Styracis japonici*.

180. **Pyrenula punctifera** WAIN. (sp. n.).

Thallus sat tenuis, pallidus, punctis leviter prominentibus, 0,1–



Vainio, Edv. A. 1921. "Lichenes ab A. Yasuda in Japonia collecti. Continuatio I."
The botanical magazine = Shokubutsugaku zasshi 35, 45–79.

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