
LICHENES NEOTROPICI

ausgegeben von Klaus Kalb & André Aptroot

Fascikel XVII (No. 651–671)

gewidmet unserem Freund und Kollegen Dr. Philippe Clerc



Fig. 1. *Niorma pulviniformis* Kalb & Aptroot

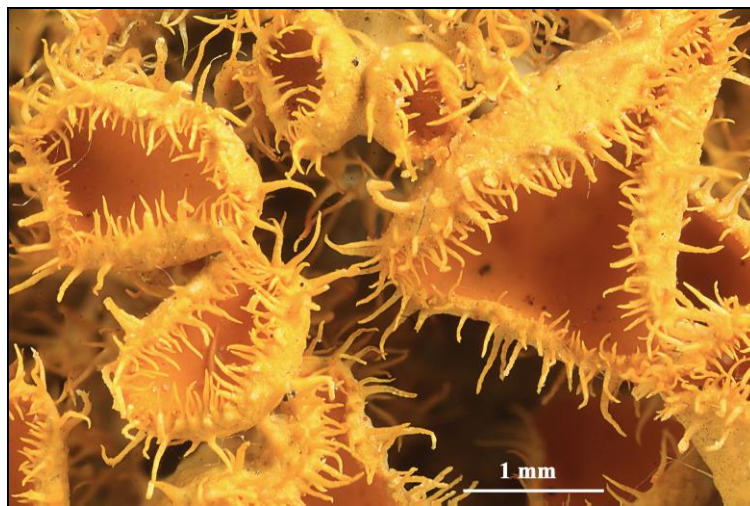


Fig. 2. *Niorma pulviniformis* Kalb & Aptroot

**Neumarkt/OPf.
26 April 2024**

Dear Philippe:

We are very happy to devote fascicle XVII of LICHENES NEOTROPICI to you. You helped us with identification of difficult *Usnea* species for this fascicle and also for fascicle XVI. As a curator of the botanical collections of the 'Conservatoire' in Geneva, you always sent very fast the lichens of our loan requests to the Lichenological Institute in Neumarkt, especially also to my students C. Gierl, B. Marbach, B. Staiger and A. Frisch to the Botanical Institute of Regensburg Uni-versity. Even if the deadline for submission of a manuscript was extremely near, you kindly investigated the lichen for us and sent the results by email. So we owe you a lot. Thank you very much for all your help.

We wish you all the very best for the future.

Your colleagues and friends Klaus & André

Acknowledgements

We thank the head of the Institute of Plant Sciences, University of Regensburg, Prof. Dr. P. Poschlod, who kindly placed the TLC equipment to our disposal. Special thanks go to Dr. Robert Lücking who compiled a phylogenetic tree which confirmed that *Buellia efflorescens* Müll. Arg. = *Amandinea efflorescens* (Müll. Arg.) Marbach should be placed in a so far undescribed genus. Dr. Felix Schumm is thanked for the two excellent pictures of *Niorma pulviniformis*. And last but not least, we thank all people mentioned in the schedae, who have collected lichen material for distribution, partly under difficult conditions.

Abstract

Fascicle XVII of the exsiccate "K. KALB & A. APTROOT: LICHENES NEOTROPICI" (new name for "K. KALB: LICHENES NEOTROPIC" from fascicle XVI onwards) with 21 lichen specimens (No. 651–671) from Australia, Brazil, Chile, Dominican Republic, Ecuador, Guatemala, Kenia, Mexico, Peru and Venezuela is distributed.

One genus and four species are described as new, namely *Efflorellia Kalb & Aptroot* gen. nov., *Efflorellia lagunensis Kalb & Aptroot* sp. nov., *Micarea oligotrophoides Kalb & Aptroot* sp. nov., *Niorma pulviniformis Kalb & Aptroot* sp. nov. and *Rinodina catolechioides Kalb & Aptroot* sp. nov.

Range extensions are reported for *Arthonia submiserula* (new to Guatemala) *Pertusaria rarotongensis* (new to the neotropics) and *Pyrrhospora palmicola* (new to Australia),

Corrections:

K. KALB: LICHENES NEOTROPICI

475. *Asteristion platycarpum* (Tuck.) I. Medeiros, Lücking & Lumbsch,
Fieldiana Life and Earth Sciences 9: 12 (2017)

Distributed as *Thelotrema leprieurii* (Mont.) Hale, Lichenes Neotropici 11: 12
(1990)

K. KALB: LICHENES NEOTROPICI

585. *Chapsa canaimae* Kalb, Archive for Lichenology 18: 2 (2020)

ISOTYPE

Distributed as *Chapsa alborosella* (Nyl.) Frisch

Differing from *Chapsa alborosella* (Nyl.) Frisch in having a silver-grey to whitish
grey thallus and distinctly smaller ascospores with less septa. ascospores 8/ascus,
3–5-septate, 10–17 × 3–4 µm ; 5–9-loculate, 17–22 × 4.5–5 µm in *C. alborosella*.

K. KALB: LICHENES NEOTROPICI

651. *Acanthotrema solediatum* Aptroot

ISOTYPE

Brazil/Minas Gerais. Catas Altas, Carassa, near Funil, on tree bark, 1300 m,
20°06' S, 43°29' W.

leg.: A. Aptroot 41409.

18–21. IX. 1997

det.: A. Aptroot

Chemistry: No lichen subst. by TLC anal.: A. Aptroot

K. KALB & A. APTROOT: LICHENES NEOTROPICI

652. *Alyxoria ochrocheila* (Nyl.) Ertz & Tehler

Brazil/São Paulo. Mainland opposite Ilha da Cananéia, on *Laguncularia racemo-*
sa, at the edge of a mangrove forest, 2 m, 25°00' S, 48°00' W.

leg.: K. Kalb & G. Plöbst

17. III. 1979

det.: A. Aptroot

Chemistry: No lichen subst. by TLC

anal.: K. Kalb

K. KALB & A. APTROOT: LICHENES NEOTROPICI

653. *Alyxoria ochrocheila* (Nyl.) Ertz & Tehler

Brazil/São Paulo. Between São Lourenço and Juquií, c. 65 km W of São Sebastião, surroundings of the river mouth of Rio Guaratuba, on *Laguncularia racemosa*, in a mangrove forest, 2 m, 23°47' S, 45°55' W.

leg.: K. Kalb

19. II. 1980

det.: A. Aptroot

Chemistry: No lichen substances by TLC anal.: K. Kalb

K. KALB & A. APTROOT: LICHENES NEOTROPICI

654. *Arthonia submiserula* Vain.

Guatemala/Baja Verapaz Along the national highway 17, c. 15 km S of Purulhá, at the base of an old *Quercus* spec., in a light and humid *Quercus* forest, 1400 m, 15°05' N, 90°11' W.

leg.: K. Kalb & G. Plöbst

2. II. 1979

det.: A. Aptroot

Chemistry: Psoromic acid (major) anal.: K. Kalb

Remark: New to Guatemala!

K. KALB & A. APTROOT: LICHENES NEOTROPICI

655. *Bacidia russeola* (Kremp.) Zahlbr.

Brazil/São Paulo. Near Ruilândia, c. 20 km SW of São José do Rio Preto, in a dense cerrado, 450 m, 20°55' S, 49°30' W.

leg.: K. Kalb & G. Plöbst

13. X. 1979

det.: K. Kalb

Chemistry: No lichen substances by TLC anal.: K. Kalb

K. KALB & A. APTROOT: LICHENES NEOTROPICI

**656. *Bacidina medialis* (Tuck ex Nyl.) Kistenich, Timdal,
Bendiksby & S. Ekman**

Venezuela/Falcón. Distr. Acosta: c. 20 km NW of Chichirivice, between Boca da Tocuyo and San Lorenzo, at the edge of a mangrove forest, 2 m, 11°00' N, 68°15' W.

leg.: K. Kalb & A. Kalb

24. VIII. 1989

det.: A. Aptroot

Chemistry: No lichen substances by TLC anal. K. Kalb

K. KALB & A. APTROOT: LICHENES NEOTROPICI

657. *Bacidina pseudoisidiata* van den Boom

Brazil/São Paulo. Ilha de São Sebastião c. 130 km E of São Paulo, western slope of Morro das Tacas, corticolous in a light and very humid rain-forest, 600 m, 23°50' S, 45°20' W.

leg.: K. Kalb & G. Plöbst

21. IV. 1978

det.: A. Aptroot

Chemistry: No lichen substances by TLC anal.: K. Kalb

K. KALB & A. APTROOT: LICHENES NEOTROPICI

658. *Buellia tesserata* Körb.

Peru/Depto. de Ica. Western foothills of the Andes 36–40 km E of Nazca on road to Puquio; steep slope and ridgetop with large boulders of rhyolite-tufa, *Caloplaca* dominant, in *Bursera-Neoraimondia* assn., 2000–2500 m.

leg.: W.A. Weber & J. Kohn

25. III. 1978

det.: F. Bungartz

Chemistry: Arthothelin anal.: K. Kalb

Remark: Previously distributed in Weber, Lichenes exsiccati No 581.

***Efflorellia* Kalb & Aptroot gen. nov.**

Mycobank 853626

Diagnosis: like *Amandinea*, but with soredia and xantheses.Type: *Efflorellia efflorescens* (Müll. Arg.) Kalb & Aptroot (holotype).**Description:** Thallus crustose, with soralia. If well developed, marginally lobe-like, similar to a very tiny *Hyperphyscia adglutinata*. Apothecia flat, black. Excipulum dark brown outside. Epihymenium dark brown, paraphyses with black caps. Hymenium not interspersed. Hypothecium dark brown. Ascospores 8/ascus, dark brown, 1-septate, generally twice as long as wide, surface granular. Pycnidia filiform when observed. Chemistry: xantheses and \pm lobaric acid.**Etymology:** Named after the type species.**Discussion:** The genus *Buellia* is in the present circumscription a polyphyletic assortment of crustose Physciaceae. In phylogenetic reconstructions, some species groups form well defined lineages. One of these lineages is here formalized as the genus *Efflorellia*. The known species of *Efflorellia* differ morphologically from species in the genus *Amandinea* by the presence of soralia, and chemically by the presence of xantheses. So far, two species are recognized in the new genus; it remains to be seen what the status of *Amandinea efflorescens* var. *hypopelidna* Marbach is, and whether or not other species of *Amandinea* with xantheses but without soralia are congeneric.

K. KALB & A. APTROOT: LICHENES NEOTROPICI

659. *Efflorellia lagunensis* Kalb & Aptroot sp. nov.**ISOTYPE**

Mycobank 853627

Diagnosis: like *Efflorellia efflorescens*, but with only tiny soralia and with ergochrome.**Description:** Thallus olive green, continuous to rimose, smooth, partly shiny, with minute soralia. Soredia granular, green, in small groups in minute soralia, often at the sides of thallus fissures. Apothecia 0.3–0.4 mm diam., flat, black. Excipulum dark brown outside. Epihymenium dark brown, paraphyses with black caps. Hymenium not interspersed. Hypothecium dark brown. Ascospores 8/ascus, dark brown, 1-septate, 10–12 \times 5–6 μ m, surface granular. Pycnidia not observed.**Etymology:** Named after the collecting locality.**Mexico/Baja California Sur.** Sierra de la Laguna, E of Todos Santos, trail to Sierra de la Laguna, subtropical thorn forest bordering the Sonoran Desert to Oak forest, on a dead tree, 100 m, 24°32' N, 110°00' W, 3. I. 1991
leg. K. Kalb & T. Nash (WIS, holotype)

Chemistry: UV-negative, Ergochrome AA (= seca-ionic acid A) anal.: K. Kalb

Discussion: *Efflorellia efflorescens* (Müll. Arg.) Kalb & Aptroot comb. nov.**Basionym:** *Buellia efflorescens* Müll. Arg., *Hedwigia* 32(3): 129 (1893), Mycobank 853628, has larger, round to confluent soralia and contains lobaric acid and 4,5-dichlorolichexanthone.

K. KALB & A. APTROOT: LICHENES NEOTROPICI

660. *Lecanactis elaeocarpa* (Nyl.) Tehler

Kenya/Central Province. Nanyuki District; between the towns Naro Muro and Nanyuki, in a tropical montane rainforest between Bantu Lodge and Mao Mao Grottos, 1945 m, 0°06'50'' S, 37°02'38'' E,
leg.: K. Kalb & A. Schrögl
18. VIII. 1985
det.: K. Kalb

Chemistry: Gyrophoric acid (major) anal.: K. Kalb

K. KALB & A. APTROOT: LICHENES NEOTROPICI

661. *Micarea oligotrophoides* Kalb & Aptroot sp. nov.**ISOTYPE**

Mycobank 853629

Diagnosis: terricolous *Micarea* with pale brown thallus of smooth convex areoles, apothecia black, convex, often aggregated, epihymenium brown, K+ pale violet, ascospores 1-septate, upper end rounded, lower end pointed.

Description: Thallus terricolous, pale brown, consisting of aggregated, smooth convex areoles of c. 0.3–0.5 mm, up to 0.5 mm thick. Apothecia black, convex, c. 0.3–0.5 mm diam., often up to 25 aggregated in groups of up to 2 mm diam. Excipulum absent. Epihymenium dark brown, K+ pale violet. Hymenium with brown pigment, paraphyses agglutinated. Hypothecium mottled dark brown. Ascospores 8/ascus, consistently 1-septate, 13.5–16 × 5–6 µm, upper end rounded, lower end pointed.

Etymology: Named for the similarity in habitus to *Placynthiella oligotropha* (J.R. Laundon) Coppins & P. James.

Venezuela/Mérida. Distrito Rangel; paramo vegetation between Laguna de Mucubaji and Laguna Negra, ca. 15 km SE of Apartaderos, 3500 m, 8°45' N, 70°45' W.

leg. K. Kalb, A. Kalb & M. López-Figueiras (VEN, holotype)
15. VIII. 1989

Chemistry: Thallus C+ red; TLC: olivetoric acid.

anal.: K. Kalb

Discussion: The habitus of this species much resembles *Placynthiella oligotropha*, which mainly differs by the larger, non-septate ascospores and the non-conglutinated paraphyses. Most species of *Micarea* either have a granular thallus or non-septate or 3-septate ascospores; there are no *Micarea* species known with 1-septate ascospores and a roughly areolated C+ red thallus.

K. KALB & A. APTROOT: LICHENES NEOTROPICI

662. *Myriotrema defectofrondosum* Aptroot**ISOTYPE**

Brazil/Minas Gerais. Catas Altas, Carassa, near Funil, on tree bark, 1300 m, 20°06' S, 43°29' W.

leg.: A.: Aptroot 41425.

18.–21. IX. 1997

det.: A. Aptroot

Chemistry: No lichen subst. by TLC; anal.: A. Aptroot

K. KALB & A. APTROOT: LICHENES NEOTROPICI

663. *Niorma pulviniformis* Kalb & Aptroot sp. nov.**ISOTYPE**

Mycobank 853630

Diagnosis: similar to *Niorma chrysophthalma*, but differing by the wider lobes and the compact growth form with short and dense branching.

Description: Thallus in 1–3 cm diam., more or less hemispherical, cushions, fruticose, dorsiventral, densely branched. Lobes 1–6 mm wide, divided every 1–2 mm, upper surface orange yellow, lower surface off white towards the margins, almost black in the center, with numerous conspicuous veins covering almost half of the width, margins covered by numerous yellow cilia of c. 0.2–0.4 mm long. Apothecia abundant, terminal, orange, 0.5–2 mm diam., disc concave, margin yellow, of thallus structure and equally covered by numerous yellow cilia of c. 0.2–0.4 mm long. Ascospores 8/ascus, polardiblastic, 12–15 × 5.5–7.5 µm.

Etymology: Named for the pulvinate growth form.

Australia/Western Australia. Chester Pass Road, N of Stirling Range, northern boarder to Stirling Range National Park, on deciduous trees along the street, 150 m, 34°16' S, 118°13' E.

leg. K. Kalb (CANB, holotype)

13. VIII. 1994

Chemistry: Parietin (major), teloschistin (minor),
parietinic acid (minor) anal.: K. Kalb

Discussion: *Niorma* is a recent segregate of *Teloschistes*, with so far only six species known. The new species is so densely branched and full of apothecia and cilia that the individual lobes are hardly visible from above. This species is most similar to *Niorma chrysophthalma* (L.) S.Y. Kondr., Kärnefelt, Elix, A. Thell, M.H. Jeong & Hur, which differs by the narrower lobes and relatively longer and less dense branching.

K. KALB & A. APTROOT: LICHENES NEOTROPICI

664. *Pertusaria rarotongensis* A.W. Archer & Elix**var. *rarotongensis***

Brazil/São Paulo. Serra da Mantiqueira near Campos do Jordão, c. 150 km NE of São Paulo, at the edge of a humid cerrado, 1700 m, 22°45' S, 45°35' W.

leg.: K. Kalb & G. Plöbst.

25. V. 1978

det.: A. Aptroot

Chemistry: Confluentic acid (major), 4,5-dichlorolichexan-
thone anal.: K. Kalb**Remark:** New to Brazil (and to the neotropics)!

K. KALB & A. APTROOT: LICHENES NEOTROPICI

665. *Phyllopsora confusa* Swinscow & Krog

Venezuela/Mérida. Distrito Rivas Dávila, paramo vegetation, ca. 20 km W of Bailadores La Negra, 3000 m, 8°15' N, 71°50' W.

leg.: K. Kalb & A. Kalb

12. VIII. 1989

det.: A. Aptroot

Chemistry: No lichen substances by TLC anal.: K. Kalb

K. KALB & A. APTROOT: LICHENES NEOTROPICI

666. *Porina conspersa* Malme

Dominican Republic/La Altagracia. El Macao, at the end of the road from La Cruz del Isleño to Punta Macao, in a coastal rainforest, 5 m, 18°47' N, 68°33' W.

leg.: K. Kalb

26. VIII. 1996

det.: A. Aptroot

Chemistry: No lichen substances by TLC

anal.: K. Kalb

K. KALB & A. APTROOT: LICHENES NEOTROPICI

667. *Pyrrhospora palmicola* Aptroot & Seaward

Australia/Queensland. Gold Coast; Jabiru Island W of South Stradbroke Island, Phil Hill Environmental Park, in a mangrove forest with dominant *Rhizophora* sp., 2 m, 27°52'40" S, 153°22'52" E.

leg.: K. Kalb
15. VIII. 2002
det.: A. Aptroot

Chemistry: at least one major spot with Rf 60,51,55 (un-known), not corresponding with thiophanic acid. This major spot is also a major ingredient in *Pyrrhospora quernei* together with 7-chloroemodin from Menorca (Balears); KK 40991

anal.: K. Kalb

Remark: New to Australia!

K. KALB & A. APTROOT: LICHENES NEOTROPICI

668. *Rinodina catolechioides* Kalb & Aptroot sp. nov.**ISOTYPE**

Mycobank 853631

Diagnosis: Saxicolous *Rinodina* with areolate egg yolk yellow thallus with 4,5-dichloro-3-*O*-methylnorlichexanthone, apothecia lecideine, sessile, ascospores *Physconia*-type, 9–10.5 × 4.5–5.5 µm.

Description: Thallus saxicolous, consisting of sideways appressed areoles. Areoles c. 0.4–1 mm diam., flat to convex, uneven or saddle-shaped, smooth, dull, intensely egg yolk yellow, often each areole surrounded by a black line., but each areole similar; not radial differentiation. Thallus with 4,5-dichloro-3-*O*-methylnorlichexanthone. Apothecia black, dull, 0.4–0.8 mm diam., lecideine, sessile, margin not very apparent. Excipulum *dispersa*-type, aeruginose. Epiphygium aeruginose. Hymenium not interspersed. Hypothecium dark brown. Ascospores *Physconia*-type, 9–10.5 × 4.5–5.5 µm.

Etymology: Named for the similarity in habitus to *Catolechia*.

Peru/Depto. de Ica. Western foothills of the Andes 36–40 km E of Nazca on road to Puquio; steep slope and ridgetop with large boulders of rhyolite-tufa, *Caloplaca* dominant, in *Bursera-Neoraimondia* assn., 2000–2500 m.

leg. W.A. Weber & J. Kohn (B, holotype)
25. III. 1978

Chemistry: 4,5-dichloro-3-*O*-methylnorlichexanthone anal.: K. Kalb

Discussion: This species has the aspect of *Catolechia wahlenbergii* (Ach.) Körb., but without any radiate lobes. It is also somewhat close to *Rinodina brattii* H. Mayrhofer (syn. *Buellia subarenaria* Müll. Arg.), which differs e.g. by the less pronounced areoles and the larger ascospores, and the different chemistry of only atranorin, and to *R. lepida* (Nyl.) Müll. Arg., which has a similar thallus colour, xanthonones and apothecia, but a continuous, not areolate thallus.

Remark: Previously distributed in Weber, Lichenes exsiccati No 582.

K. KALB & A. APTROOT: LICHENES NEOTROPICI

669. *Usnea fruticans* Motyka

Venezuela/Mérida. District Rangel; paramo vegetation between Laguna Mucubaji and Pico Mucuñuque, ca. 15 km SE of Apartaderos, 3500 m. 8°45' N, 70°45' W.

leg.: K. Kalb & A. Kalb
16. VIII. 1987
det.: P. Clerc

K. KALB & A. APTROOT: LICHENES NEOTROPICI

670. *Usnea laevis* (Eschw.) Nyl.

Venezuela/Mérida. District Libertador; El Valle, a few km E of Merida, in a cloud forest with dominating *Podocarpus* spec. 2700 m. 8°40' N, 71°05' W.

leg.: K. & A. Kalb
2. VIII. 1989
det.: A. Aptroot

Chemistry: usnic acid (major), several unknowns
anal.: K. Kalb

K. KALB & A. APTROOT: LICHENES NEOTROPICI

671. *Usnea radiata* Stirt.

Venezuela/Mérida. District Rangel; between Santo Domingo and Apartaderos, in a cloud forest, 2900 m. 8°50' N, 70°45' W.

leg.: K. & A. Kalb
5. VIII. 1989
det.: P. Clerc



Fig. 3. *Efflorellia lagunensis* Kalb & Aptroot



Fig. 4. *Micarea oligotrophoides* Kalb & Aptroot



Fig. 5. *Rinodina catolechioides* Kalb & Aptroot