

Slime molds from Chile

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Abstract: Bark was collected from living trees in Chile and cultured in moist chamber cultures in 1995. Together with field collections, 18 myxomycete species and one acrasian are reported herein. Sixteen were new to Chile at the time they were recorded, including *Lamproderma sauteri* from the snowline, and twelve appeared to be new records for South America at that time.

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During October 1995 the second author collected 42 samples of bark from living trees at eleven sites. A small number of field collections from fallen wood yielded several additional species. The bark was subsequently cultured in standard moist chamber cultures and the corticolous myxomycetes harvested (Ing, 1999). The cultures were maintained for three months or until overgrown by filamentous fungi. Bark from a further site yielded no myxomycetes – a most unusual situation – but this may have been because the trees were young. Voucher specimens are retained in the herbarium of B. Ing and will be deposited in the herbarium E in the future.

Most of the myxomycetes isolated are characteristic of temperate forests and are generally widespread and common species. Previous records from Chile at the time this study was carried out were given by Sturgis (1916), Lazo (1966) and Farr (1976). Comments on the distribution and ecology of the species is based on Ing (1994, 1999).

Collecting Sites

1. Along the road to Laguna del Laja National Park, 6 km east of Antuco: scrub forest with *Baccharis*, *Fabiana*, *Lithrea*, *Nothofagus*, *Schinus* and *Sophora*.
2. Near the administration buildings, Laguna del Laja National Park: forest with *Aristotelia*, *Fabiana*, *Libocedrus*, *Lomatia*, *Nothofagus* and *Schinus*.
3. Along the road to Nahuelbuta National Park, 10 km from Angol: *Araucaria/Nothofagus* forest.
4. On the road to Angol, 19 km from Nahuelbuta National Park: *Drimys winteri* scrub.

5. Conguillio National Park, administrative area: *Nothofagus dombeyi* forest.
6. Conguillio National Park, southern entrance: mixed forest with *Laureliopsis*, *Libocedrus* and *Prumnopitys*.
7. Conguillio National Park, near Playa Linda: *Araucaria/Nothofagus* forest.
8. Near Melipeuco on road to Conguillio National Park: *Nothofagus/Podocarpus* forest.
9. Osorno, Pucomo: *Nothofagus/Drimys* forest.
10. Rosales National Park, Salto Petrohue: *Nothofagus dombeyi* forest.
11. Puyehue National Park, below Antillanca: *Nothofagus pumilio* forest up to the snowline.

Species list (** indicates new to Chile at the time the study was carried out)

Calomyxa metallica (Berk.) Niewland

Site 6, on bark of *Libocedrus chilensis*. Recorded by Sturgis (1916) but unknown elsewhere in South America. In the northern hemisphere essentially a temperate species.

***Dianema harveyi* Rex

Site 1, on bark of *Sophora microphylla*. A rare species with a scattered distribution but almost confined to the temperate zone.

***Echinostelium brooksii* K.D. Whitney

Site 7, on bark of *Araucaria araucana*. Probably cosmopolitan and certainly widespread in the north temperate zone.

***Echinostelium colliculosum* K.D. Whitney & H.W. Keller

Site 7, on bark of *Araucaria araucana*. Widespread, not confined to temperate regions.

**Echinostelium minutum* de Bary

Site 2, on bark of *Fabiana imbricata*. Widespread in South America, as elsewhere.

***Hemitrichia karstenii* (Rostaf.) List.

Site 9, on bark of *Myrceugenia apiculata*. Widespread in north temperate regions.

***Lamproderma sauteri* Rostaf.

Site 11, on *Chusquea* stem beneath the snow. A widespread snowline species, to be expected from the Andes. Farr (1976) includes it on the strength of material from Brazil which may have been misidentified

***Licea inconspicua* T.E. Brooks & H.W. Keller

Site 1, on bark of *Sophora microphylla*. Widespread, but not common, on bark in north temperate regions.

***Licea kleistobolus* G.W. Martin

Sites 1,2,5-10, on bark of *Aristotelia*, *Fabiana*, *Gevuina*, *Libocedrus*, *Lomatia*, *Myrceugenia*, *Nothofagus*, *Schinus* and *Sophora*. Cosmopolitan and generally very common, especially on thin smooth bark of trees, lianes and vines.

***Licea parasitica* (Zukal) G.W. Martin

Sites 1,5,6,8,9, on bark of *Laureliopsis*, *Lithrea*, *Myrceugenia* and *Nothofagus*. Cosmopolitan, usually the most common species on bark of all kinds.

***Paradiacheopsis fimbriata* (G.List.& Cran) Hertel

Site 7, on bark of *Araucaria araucana*. Probably cosmopolitan on the bark of conifers and the naturally acid bark of broadleaf trees and bark affected by acid deposition.

***Paradiacheopsis solitaria* (Nann.-Bremek.) Nann.-Bremek.

Site 1, on bark of *Schinus polygamus*. Another widespread corticolous myxomycete, especially characteristic of older trees in primary or old secondary woodlands.

**Perichaena chrysosperma* (Currey) List.

Site 8, on bark of *Nothofagus obliqua*. Probably cosmopolitan and widespread in South America.

**Perichaena vermicularis* (Schwein.) Rostaf.

Sites 1,2,4,6,9, on bark of *Baccharis*, *Drimys*, *Libocedrus*, *Myrceugenia* and *Prumnopitys*. Cosmopolitan, widespread in South America; usually a litter species but not uncommon in bark cultures which have been kept for some months.

Physarum compressum Alb.& Schwein.

Site 3, on bark of *Nothofagus obliqua*. Cosmopolitan and widespread in South America, previously recorded for Chile by Lazo (1966). Like the last species usually found in herbaceous litter.

***Pocheina rosea* (Cienk.) Loeblich & Tappin

Sites 3,6,8, on bark of *Gevuina*, *Laureliopsis* and *Nothofagus*. This acrasian is common on acid bark and widespread in the north temperate zone. Because it occurs frequently in bark cultures for myxomycetes it is often mistaken for a myxomycete but belongs to an unrelated group.

***Stemonitopsis amoena* (Nann.-Bremek.) Nann.-Bremek.

Site 8, on bark of *Gevuina avellana*. Scattered, but frequent, in temperate Europe and Asia but not previously reported from the western hemisphere.

**Stemonitopsis subcaespitosa* (Peck) Nann.-Bremek.

Site 8, on bark of *Nothofagus obliqua*. A generally rare and misunderstood species, previously known in Europe, North America, Venezuela and Argentina.

Trichia verrucosa Berk.

Site 9, on fallen wood of *Lomatia hispida*. Reported from Chile by Sturgis (1916) and widespread in South America on hardwood as well as conifer wood, unlike in Europe where it is confined to coniferous wood.

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