

## SHORT COMMUNICATIONS

### A NOMENCLATURAL NOTE ON *LAUDERLINDSAYA* (ASCOMYCOTINA, VERRUCARIALES)

David & Hawksworth (1989) introduced the new generic name *Lauderlindsaya* for the lichenicolous fungus growing on *Normandina pulchella* (Borrer) Nyl., previously known as *Sphaerulina chlorococca*. They considered as conspecific specimens growing on *N. pulchella*, and 'free-living' specimens not associated with *N. pulchella*, but having their own thallus.

Diederich *et al.* (1991) are of the opinion that two different species should be recognized: a lichenicolous, non-lichenized species growing on *N. pulchella*, named *Lauderlindsaya borrieri* (L. R. Tulasne) J. C. David & D. Hawksw., and a lichenized, non-lichenicolous species for which the new combination *Lauderlindsaya erichsenii* (Keissler) Diederich & Sérusiaux was introduced. This species has a distinct greyish green to yellowish corticated thallus with a shiny surface, 20–50 µm thick. It has a chlorococcoid photobiont with green spherical cells of 8–15 µm diam., closely associated with the hyphae of the mycobiont. Goniocysts of 30–40 µm in diam., with algal cells of 5–8 µm in diam. are often formed and liberated in large quantities, giving the thallus a sorediate aspect, with pale greenish yellow soredia. The species is known from Belgium, the British Isles, France, Germany, Italy, Luxembourg and the Netherlands (Diederich 1989, Aptroot 1991). A typical thallus of this species with numerous perithecia is illustrated in Fig. 3.

David & Hawksworth (1989) found that the perithecial wall of the lichenized species tends to break up into plates in squash preparations, whereas this is not the case in the lichenicolous species (illustrated in Fig. 2). We confirm this statement, on the basis of detailed observations in recent collections of both species. It should also be noted that spores of *Lauderlindsaya* are generally described with transverse septa only. We have found that the spores of both species can sometimes be submuriform.

Mr J. C. David and Prof. D. L. Hawksworth drew our attention to an older name for the lichenized species, *Verrucaria chlorococca* Leighton, and the new combination given below is therefore necessary. In the meantime other authors regard the perithecia as belonging to the *Normandina* thallus. For the time being, we cannot present any convincing arguments to prove one of these two alternatives. Those who believe that the perithecia belong to *N. pulchella* should follow Aptroot (1991) and call these species *Normandina* sp., instead of *Lauderlindsaya* sp. Aptroot (1991) includes a further lichenized species in this genus, *N. simodense*, known from several collections made in Japan and in Papua New Guinea.

The genus *Lauderlindsaya* thus contains the following three species:

#### ***Lauderlindsaya borrieri* (L. R. Tulasne) J. C. David & D. Hawksw.**

In *Sydowia* 41: 116 (1989).—*Sphaeria borrieri* L. R. Tulasne, *Ann. Sci. nat., Bot.*, sér. 3, 17: 128 (1852).

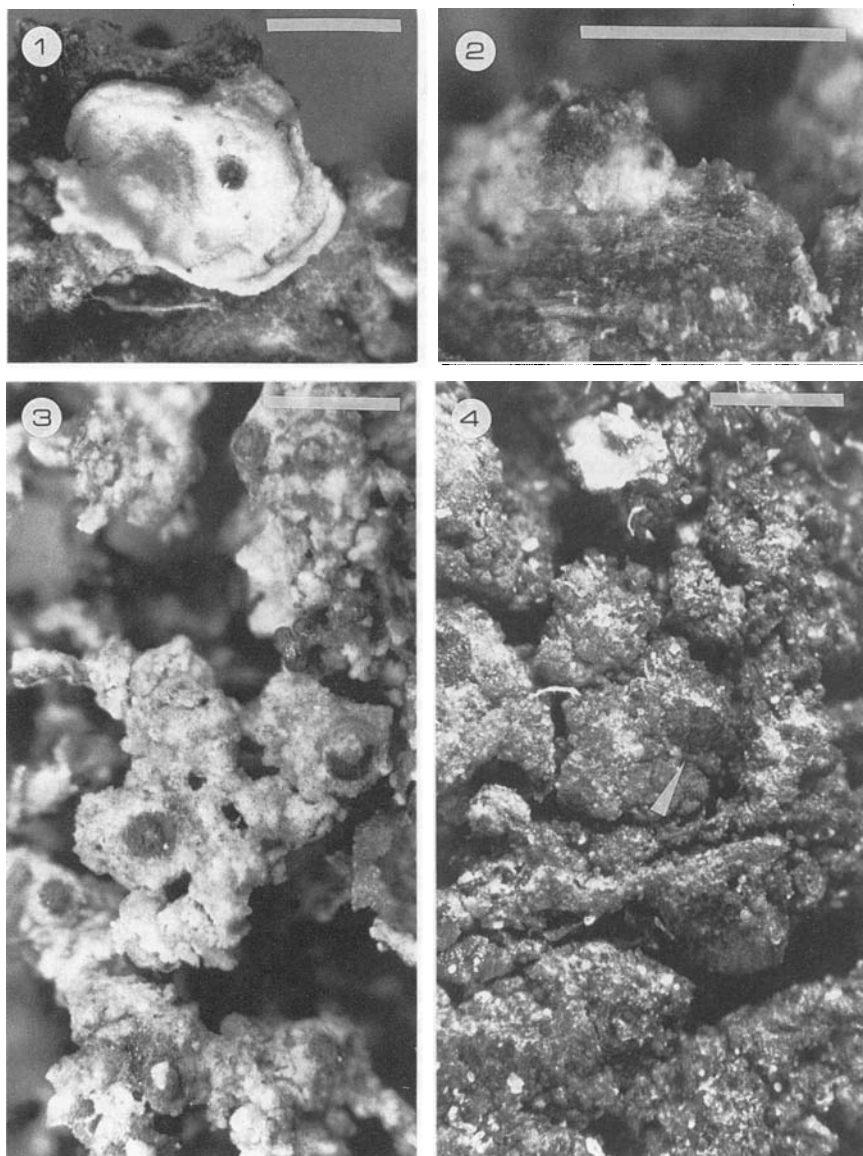


FIG. 1. Lectotype of *Sphaeria borrieri* L. R. Tulasne (K). Thallus of *Normandina pulchella* with one perithecium.

FIG. 2. Holotype of *Polyblastia armericola* W. Watson (BM). Pale thallus fragment with one perithecium.

FIG. 3. *Lauderlindsaya chlorococca* (hb. Diederich 8118). Typical thallus with several perithecia.

FIG. 4. Lectotype of *Verrucaria chlorococca* Leighton (BM). Dark thallus with one perithecium (arrow). Scale 0.5 mm.

(Fig. 1)

**Lauderlindsaya chlorococca (Leighton) Diederich & Sérusiaux comb. nov.**

*Verrucaria chlorococca* Leighton, *Lich. Fl. Br.*, ed. 3: 484 (1879).—*Arthopyrenia chlorococca* (Leighton) A. L. Smith, *Monogr. Br. Lich.*, ed. II, 2: 361 (1926).—*Thelidium chlorococcum* (Leighton) Keissler, *Rabenh. Krypt. Fl.*, ed. 2: 9, 1(2): 191 (1938).—*Sphaerulina chlorococca* (Leighton) R. Sant., in Henssen, apud Brown *et al.*, *Lichenology: Progr. Probl.*: 129 (1976).

*Thelidium erichsenii* Keissler, *Revue mycol.* 1: 179 (1936).—*Lauderlindsaya erichsenii* (Keissler) Diederich & Sérusiaux, *Lejeunia* N.S. 136: 21 (1991).—*Normandina erichsenii* (Keissler) Aptroot, *Willdenowia* 21: 265 (1991).

*Polyblastia armericola* W. Watson, *J. Bot., Lond.* 77: 42 (1939).

(Figs 2–4)

**Lauderlindsaya simodense (Asahina) Diederich & Sérusiaux comb. nov.**

*Heterocarpon simodense* Asahina, *J. Jap. Bot.* 8: 65 (1933).—*Normandina simodense* (Asahina) Aptroot, *Willdenowia* 21: 265 (1991).

References to the type specimens are given by David & Hawksworth (1989) and Aptroot (1991). The type of *Thelidium erichsenii* has not been available for study (HBG) but it has been examined recently by Aptroot (1991), David & Hawksworth (1989) and Jacobsen & Coppins (1989), who conclude that it represents the European lichenized species. The type of *Polyblastia armericola* is very fragmentary, showing a few perithecia growing on thallus fragments that most probably do not belong to *N. pulchella*, but represent the thallus of *L. chlorococca* (see Fig. 2). We have not studied the type specimen of *L. simodense*, but we have seen fresh material of this species collected by Mr A. Aptroot in Papua New Guinea.

Aptroot (1991) suggests that the correct generic name for the perithecia on *Normandina*—if they are considered to be parasymbiotic—is *Normandinomyces* Ciferri & Tomaselli, instead of *Lauderlindsaya*. Although the text on page 58 of Ciferri & Tomaselli (1953) may be confusing, the authors clearly indicate on page 30 that *Normandinomyces* is based on the same type as *Normandina*. David & Hawksworth (1989) correctly conclude that *Normandinomyces* is nomenclaturally illegitimate (ICBN: Art. 63).

We wish to thank Mr A. Aptroot, Mr J. C. David and Prof. D. L. Hawksworth for interesting discussions on *Lauderlindsaya*, as well as for their valuable comments on our manuscript. We are grateful to the curators of BM and K for the loan of type specimens in their care, and to Mr A. Aptroot for showing us specimens of *L. simodense*.

#### REFERENCES

- Aptroot, A. (1991) A conspectus of *Normandina* (Verrucariaceae, lichenized Ascomycetes). *Willdenowia* 21: 263–267.  
Ciferri, R. & Tomaselli, R. (1953) Saggio di una sistematica micolichenologica. *Atti dell'Istituto Botanico e Laboratorio Crittogamico di Pavia, ser. 5* 10: 25–84.

- David, J. C. & Hawksworth, D. L. (1989) *Lauderlindsaya*, a new genus in the Verrucariales for *Sphaerulina chlorococca* (Leighton) R. Sant. *Sydowia* **41**: 108–121.
- Diederich, P. (1989) Les lichens épiphytiques et leurs champignons lichénicoles (macrolichens exceptés) du Luxembourg. *Travaux Scientifiques du Musée national d'histoire naturelle de Luxembourg* **14**: 1–268.
- Diederich, P., Sérusiaux, E. & van den Boom, P. (1991) Lichens et champignons lichénicoles nouveaux ou intéressants pour la flore de la Belgique et des régions voisines. V. *Lejeunia*, N.S. **136**: 1–47.
- Jacobsen, P. & Coppins, B. J. (1989) On the identity of some “endemic” North German lichens. *Nova Hedwigia* **49**: 255–273.

**Paul Diederich\* and Emmanuël Sérusiaux‡**

\*Musée national d'histoire naturelle, Marché-aux-Poissons, L-2345 Luxembourg, Luxembourg.

‡Research Associate (F.N.R.S.), Université de Liège, Département de Botanique, Sart Tilman, B-4000 Liège, Belgium.