TWO NEW PUCCINIAS FROM SOUTH WEST ASIA

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Puccinia scutellariae Henderson, **sp. nov.**

Teliis caulicolis aggregatis, 1–2 mm diametro, ellipticis pulvinatis, atrofuscis; teliosporis late ellipsoideis, 44–50 × 22–27μm, apice rotundatis, rare conicis, septim leviter constrictis, episporio leve 2–3μm crasso apice 6–8μm crasso, flavo-brunneo, poro in cellulo superiore ad apicem, poro in cellulo inferiore ad septum, pedicello persistenti hyalino, 70–100 × 8–10μm (Plate 11, a).

Holotype on *Scutellaria glutinosa* Benth. Afghanistan. Ghazni: Boyghaluk near Shashgao, 24 km NE of Ghazni, 2400m, 29 vi 1962; *Rechinger* 17278 (E).

It is remarkable that although *Scutellaria* is a genus of considerable size and occurs mainly in temperate regions, it is notably free of most fungi. Many of the fungi on Labiatae are rather uncommon even when the host is abundant but no telia-bearing *Puccinia* has been described on *Scutellaria*. The only rusts known on the genus are *Aecidium scutellariae* Sydow from India and *Aecidium scutellariae-indicae* Diet. known from Japan and China.

Puccinia scutellariae undoubtedly belongs to the group of rusts which Gaumann (1959) recognises as a 'Formenkreis' of *Puccinia salviae*. The species of this affinity form closely grouped telia on a mycelium which is somewhat systemic and consequently the infection is often associated with witches' brooming of the host or at least distortion of small shoots. The scanty material of *P. scutellariae* shows one shoot heavily infected both on shoot, petioles and leaves. *P. salviae* also has smooth teliospores with persistent pedicels, the teliospores thickened at the apex. It is doubtful if *P. scutellariae* can be absolutely discriminated from its nearest allies, *Puccinia polii*, *P. salviae* and *P. stachydis* without reliance on the generic identity of its host, but the system of rust taxonomy works well giving emphasis to host at genus level so I have little hesitation in describing this fungus as new.

Puccinia quadricostata Henderson, **sp. nov.**

Teliis hypophyllis, atris, c. 1–1·0 mm diam., teliosporis 2-cellularibus, ellipsoideis vel oblongo-ellipsoideis, 40-48 × 20–23 μm, membrana 2–3μm crassa, castaneo-brunnea, quattuor costis verrucosis praedita, poris germinationibus in cellulis superioribus apicalibus in cellulis inferioribus ad pedicellum dispositis, pedicello breve hyalino, 8–10μm longo. (Plate 11, b).

On leaves of *Lecokia cretica* (Lam.) DC. Iran: Elburz, in foothills near Chalus, 450 m, 17 iii 1962, *Furse* 1076 (holo-E).

Puccinia quadricostata lies closest to *Puccinia smyrnii*. Indeed *P. smyrnii* also attacks *Lecokia cretica* and I have examined collections from Turkey and Cyprus but whereas *P. smyrnii* has a wide-meshed reticulum on the teliospore surface, *P. quadricostata* has four longitudinal verrucose costae with only a very faint intercostal reticulum. In some respects this patterning

resembles that of *Puccinia rugulosa* but in that species there are up to twenty costal ridges per spore. Tranzschel in his Conspectus Uredinalium URSS records *P. smyrnii* on *Lecokia* from Lenkoran based on a collection by Grossheim but there seems to be no other record of rusts on *Lecokia* in the region of the Elburz.