

MYCENA INDICA SP. NOV. FROM INDIA

B. M. SARWAL AND G. S. RAWLA
Botany Department, Panjab University,
Chandigarh 160 014, India.

MYCENA indica Sarwal and Rawla sp. nov. (Agaricales) from Himachal Pradesh in the North-West Himalayas is described and illustrated.

During a collection trip in the Himachal Pradesh an interesting species of *Mycena* (Pers. ex. Fr.) S. F. Gray was collected. After critical study and comparison with other related species, it was considered to be new to science. Our observations were confirmed by the Royal Botanic Gardens, Kew, England. The cited collection has been deposited in the Herbarium, Botany Department, Panjab University, and a sizable part has been deposited at the Royal Botanic Gardens, Kew, England.

The abbreviations used in the text are according to Holmgren and Keuken¹. The colour standards are as per Rayner².

Mycena indica Sarwal et Rawla sp. nov.

Basidiocarpus solitarius, dispersus. *Pileus* ad 2 cm diam. convexus vel plano-convexus, umbonatus, ochraceus, obscurior ad umbilicum, gracilis, papyraceus, glaber. *Margo* tenuis, recta, integra, striata. *Lamellae* subdecurrentes vel decurrentes, ochraceae, ventricosae, tenues, distantes, cum lamellis trium inaequalium, longitudinum; margo integra, lenis, concolor. *Stipes* 4-6 × 0.2 cm, medius, raro extra medius, rectus, cylindricus, basi inflatus, cavus, ochreus, tenuiter pruinosis. *Velum* nullum. *Contextus* gracilis, ad 0.2 cm crassus in medio, spongiosus, hyalinus, inamyloideus, constantans hyphis hyalinis tenuitunicatae, 2.5-8 μm diam. *Odor* leniter agaricoideus. *Gustus* nullus. *Sporae* 6-8.5 × 3-4 μm, ellipticae, hyalinae, amyloideae, tenuitunicatae. Sporae in deposito albidae. *Basidia* 22-40 × 7-11 μm, clavata, hyalina, inamyloidea, includentia granulos, portantia 4-sterigmata, (3-5 × 1-1.5 μm). *Cheilocystidia* plura, 15-22 × 5-8.5 μm, clavata vel lageniformia, hyalina, tenuitunicatae, levia. *Pleurocystidia* rara, 35-45 × 5-7.5 μm, clavata, hyalina, tenuitunicatae levia. *Trama hymenophora* subregularis vel regularis, hyalina, inamyloidea, constans ex tenuitunicatae hyphis, 2-4 μm diam. *Subhymenialis propago* minus evoluta, ad 9 μm ampla, cellularis. *Superficies pilealis*, cutis quaedam ex repentibus, hyalinis, hyphis 2-8 μm diam. *Capilli pilei* cylindrici cum apice ample acuminato, crassotunicatae, et cellulis basicis tenuitunicatae continentibus granulos, 32-90 × 6-9 μm. Omnes hyphae carent connexionibus ligaminis.

Collectio examinata: PAN 100405 (Holotypus), inter pinorum stramenta, Kasauli (ca. 6000 feet) Himachal Pradesh, India. Mense Augusto 2, 1979. Legit B.M. Sarwal, isotypus in K No. 5/79.

Mycena indica Sarwal & Rawla sp. nov. (Fig. 1. A-H).

Basidiocarp solitary, scattered, *Pileus* up to 2 cm diam., convex or plano-convex, umbonate, 'Umber', darker at the umbo, thin, papery, glabrous. *Margin* thin, straight, entire, striate. *Lamellae* subdecurrent or decurrent, 'Ochraceous', ventricose, thin, distant, with lamellulae of 3 unequal lengths; edge entire, smooth and concolourous. *Stipe* 4-6 × 0.2 cm, central, rarely excentric, straight, cylindric with swollen base, hollow, 'Ochreous', finely pruinose. *Veil* none. *Context* thin, up to 0.2 cm thick at the centre, spongy, hyaline, inamyloid, consisting of hyphae, which are hyaline, thin-walled, 2.5-8 μm diam. *Smell* feebly agaricoid. *Taste* none. *Spores* 6-8.5 × 3-4 μm, elliptic, hyaline, amyloid, thin-walled. *Spore-print* whitish. *Basidia* 22-40 × 7-11 μm, clavate, hyaline, inamyloid with granular contents, bearing 4-sterigmata (3-5 × 1-1.5 μm). *Cheilocystidia* numerous, 15-22 × 5-8.5 μm, clavate or lageniform, hyaline, thin-walled, smooth. *Pleurocystidia* rare, 35-45 × 5-7.5 μm, cla-

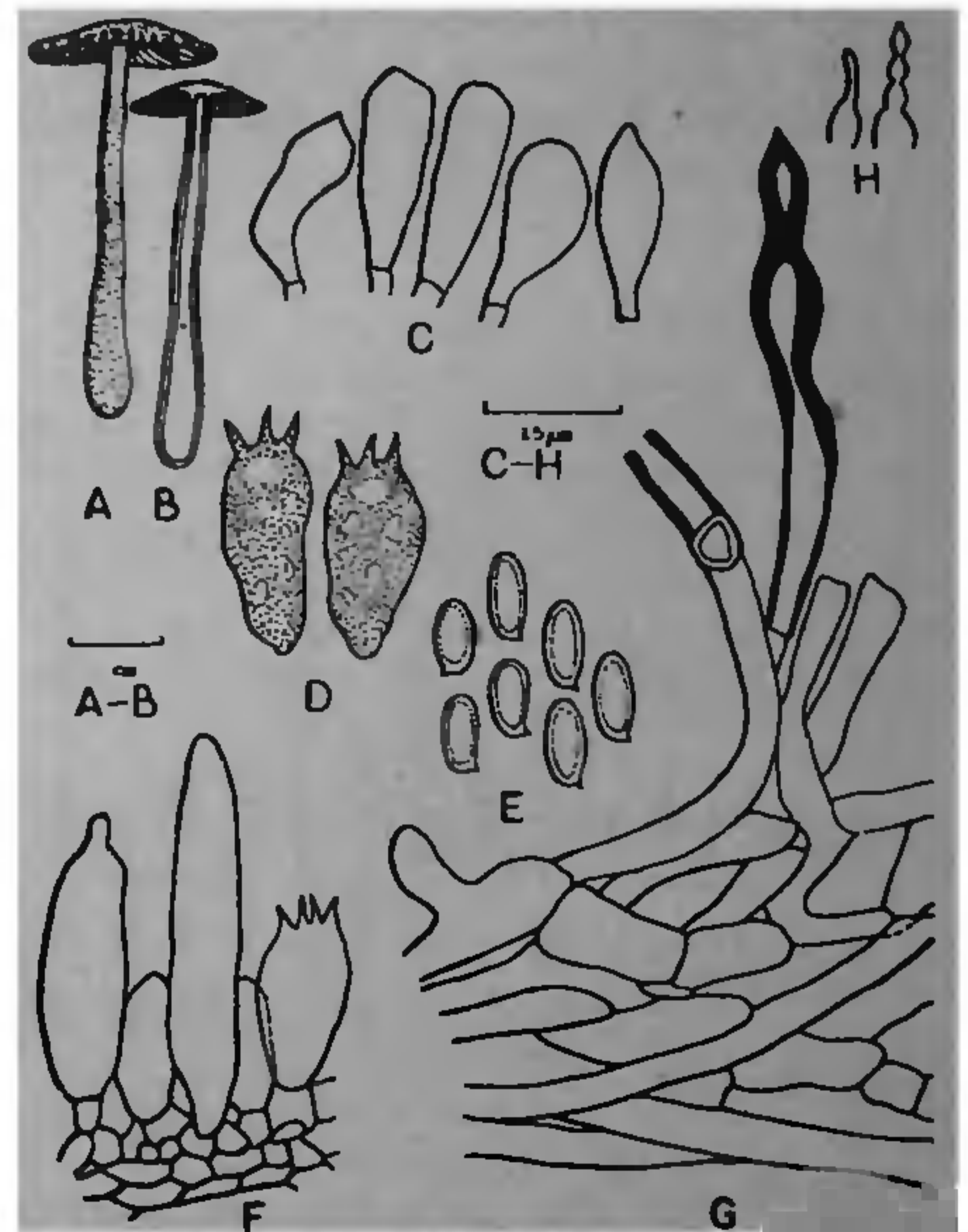


Figure 1. A-H *Mycena indica* 100 405 (PAN). A. Habit. B. L. S. basidiocarp. C. Cheilocystidia. D. Spores. E. Hymenophoral trama (part). F. Epicutis (part). H. Hair apices.

vate, hyaline, thin-walled, smooth. *Hymenophoral trama* subregular or regular, hyaline, inamyloid, consisting of thin-walled, hyphae, 2–4 μm diam. *Subhymenial layer* less developed, up to 9 μm wide, cellular. *Pileal-surface* a cutis of repent, hyaline, thin-walled, radially-arranged hyphae, 2–8 μm diam. *Hair of pileus* cylindrical with broadly acuminate, thick-walled apex and thin-walled basal cells with granular contents, 32–90 \times 6–9 μm . All hyphae devoid of clamp-connections.

Collection examined: PAN 100405 (Holotypus), among the pine needles, Kasauli (ca 6,000 ft), Himachal Pradesh, India, August 2, 1979. Legit B. M. Sarwal, isotype in K No. 5/79.

Etymology of the specific epithet:

Named after the country from where the collection has been made.

The presence of non-diverticulate long hairs, short and broad basidia, pruinose stipe and striate pileus suggest that the cited collection can be placed in the section *Radiatae* Sing. It is similar to *M. dennisii* Sing. and *M. radiata* (Dennis) Sing. *Mycena dennisii* differs from cited collection in having interveined lamellae, pileus white, membranous, conspicuously radially sulcate, lacking cystidia and spores globose, 6–7 μm diam. *Mycena radiata* differs from it in having brownish pileus, basidia 2-spored and ellipsoid spores, 6–9 \times 3–3.5 μm . Hence, a new species is being proposed. It is characterised by pruinose, umbonate, 'Umber' pileus, striate margin, subdecurrent or decurrent lamellae, elliptic, amyloid spores, 4-spored basidia, presence of cystidia and cuticular pileal-surface with long thick-walled, 1-septate hair.

The authors thank Dr. D. N. Pegler, Royal Botanic Gardens, Kew, England for confirming the identification of the taxon. Sincere thanks are extended to Rev. Fr. J. J. Serrano, S. J., Simla for latin translation.

18 January 1982; Revised 10 September 1982

- Holmgren, P. K. and Keuken, W., *Index herbarium Part I. The herbaria of the world*, 1974, 6 ed., Regnum veg. 92.
- Rayner, R. W., *A mycological colour chart*, CMI, Kew, Surrey, England, p. 70 1970.

A NEW LEAF SPOT DISEASE OF GARDEN NASTURTIUM FROM INDIA

D. K. AGARWAL AND A. K. SARBHAY
Division of Mycology and Plant Pathology, Indian
Agricultural Research Institute, New Delhi
110 012, India.

A SEVERE leaf spot disease of Garden Nasturtium (*Nasturtium officinale* R. Br.) was observed at the Raja Hotel Lawns in Pithoragarh during November, 1982. The microscopic examination and repeated isolations from the affected parts showed the presence of a species of *Acroconidiella*.

The disease initially appeared as small light brown, minute and round spots scattered all over the leaf surfaces. Gradually the spots increased in size upto 12 mm in diam., and became tan coloured with brown margins and coalesced with each other occupying most of the leaf area. Older spots become papery with light brown concentric rings visible on both sides of the leaf lamina. The central necrotic tissues form a broad yellow margin all around. More often the necrotic tissues of the spots drop off leaving shot hole symptoms (figure 1). Ultimately yellowing and dropping of leaves is common followed by drying of twigs.

The causative fungus has been identified as *Acroconidiella tropaeoli* (Bond) Lindquist and Alippi, and pathogenicity was also established under glasshouse conditions.

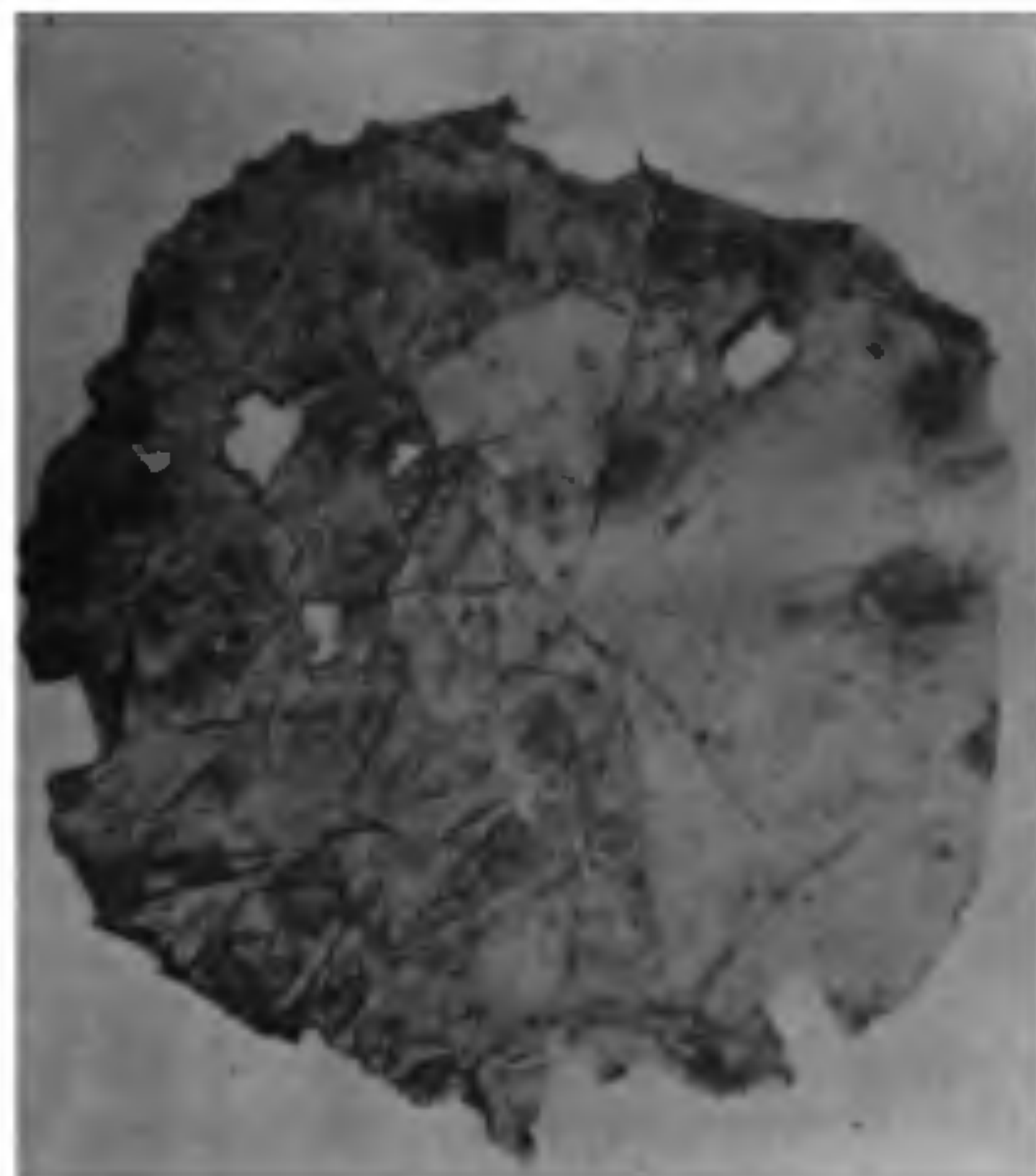


Figure 1. Leaf spots of *Nasturtium* due to *A. tropaeoli*