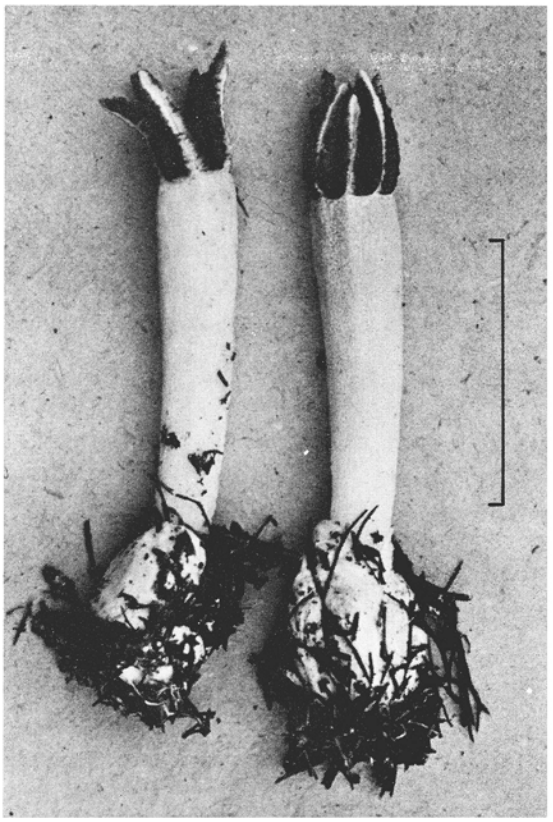
LYSURUS GARDNERI



Mature stinkhorns with elongated stalk and brownish spore mass on the fingers. Globular base is the ruptured volva or egg. DAOM 151622. Scale equals 5 cm.

Lysurus gardneri Berk., J. Bot., London, 5: 535. 1846.
= *Mutinus sulcatus* Cke. & Massee, Grevillea 17: 69. 1889.
= *L. australiensis* Cke. & Massee, Grevillea 18: 6. 1889.
= *Anthurus borealis* Burt, Mem. Boston Soc. Nat. Hist. 3: 504. 1894.

EGG (the young, unexpanded state) white, soft, leathery, globular, to 3 cm diam., arising from white, mycelial strands which permeate the substrate. STALK in the mature state 10-15 cm long and up to 3 cm diam., white, hollow, with a finely roughened surface. CAP composed of 5 to 7 fingers, each up to 3 cm long, initially appressed giving the cap a conical shape, at maturity the fingers diverging from each other and pointing essentially upward, arranged around the top of the stalk. HYMENIUM pale red-brown to pale olive-brown, covering the finely wrinkled surface of the fingers. BASIDIA not seen. SPORES 5 to 8 per basidium, elliptical, 4-6 × 2μ; spore wall hyaline, smooth, thin, pale yellow in Melzer's reagent, lacking an apiculus.

SUBSTRATE: Predominantly associated with undecomposed horse manure, in heavily fertilized gardens, in stable sweepings, and in greenhouses.

DISTRIBUTION: Quebec, Ontario, British Columbia.

COLLECTIONS: Que.: Papineau Co., 27.VIII.1937, DAOM 4848 (F.S. Thatcher). Ont.: Navan, 12.IX.1975, 154172 (V. Nealis); Ottawa, 15.X.1975, 151622 (D. McLeod), and 25.X.1955, 49640 (J.W. Groves et al); Russell, 23.X.1936, 7178 (Hitsman). B.C.: Victoria, 14.XI.1965, 111974 (M.C. Melburn).

NOTES: Miss M.C. Melburn reported (The Victoria Nat. 22(5): 49. 1966) *Lysurus gardneri* from Victoria

and Vancouver, B.C., and this is the only published record of this species in Canada.

The synonymy is taken from Cunningham (Gastero. Austral. N. Zeal., J. McIndoe (Dunedin), 236 pp., 1942). Smith and Smith (Non-gilled Fleshy Fungi, W.C. Brown (Dubuque), 402 pp., 1973) treated the species as *Anthurus borealis* and reported the basidia to be "constricted at intervals...like a string of beads". Presumably the Smiths are referring to Burt's (l.c.) description of the basidia in *A. borealis*. Cunningham (l.c., p. 106) "examined immature plants and found the basidia to be normal and typical of the phalloids and certainly showing no resemblance to those described by Burt". I did not find basidia on the collections at DAOM because they disintegrate when mature, thus releasing the spores.

Ramsbottom (Mushrooms & Toadstools, Collins (London), 306 pp., 1953) argued that since the phalloids were principally tropical in distribution, *L. gardneri* probably had been introduced into Europe. The early reports of this species from North America do not contradict Ramsbottom's hypothesis because specimens were cited from coastal areas, frequently the larger port cities. Current distribution in the U.S.A. (taken from literature reports) is Mass., R.I., Conn., N.Y., N.J., Penna., Ohio and Calif. However, it is surprising that *L. gardneri* has not been found in the Maritime Provinces or along the St. Lawrence waterway.

The infrequency of occurrence of *L. gardneri* suggests that climatic cycles may influence its fruiting. The Canadian collections were made almost at ten-year intervals, which is probably coincidental. The two Ottawa district collections were made during the extremely hot and dry summer of 1975.

J.H. Ginns

National Mycological Herbarium, Biosystematics Research Institute
Research Branch, Agriculture Canada
Ottawa, Ontario, K1A 0C6

April, 1977