

Lysurus cruciatus (Lepr. & Mont.) Lloyd, 1909

Description: Fruiting body consists of a cylindrical stipe topped by a number of short, vertical arms. To 150 mm in length, up to 20 mm diameter.

Egg: White, diameter to 50 μ m, with white rhizomorphs at the base. May have vertical grooves in the surface which correspond to the developing arms of the fruiting body inside. The egg remnants are seen as a white-coloured volva at the base of the mature fruiting body's stem.

Stipe: Cylindrical – tapering towards the base, sometimes also towards the top, occasionally tending towards polygonal in cross-section in the upper part. Up to 100 mm tall and to 20 mm diameter. May be white, yellowish, pinkish or a creamy buff at the top, graduating to pale cream or white at the base. Hollow, with the cavity to 6 mm diameter and open at the bottom and top, or nearly closed over at the top by a thin, dome-shaped diaphragm. There is a horizontal furrow at the top of the stipe that runs around the circumference, just below the arms. Stipe wall is fragile, consisting of two or three layers of interconnecting tubes or chambers.



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Arms: 4-7, erect, thick, conical or claw-shaped with three sides, to 40 mm long – sometimes different lengths may be on the same fruiting body. Colour may be amber brown, cinnamon brown, reddish, fleshy pink, orange or white. There is a shallow, smooth furrow or groove that runs down the entire length of the outer surface of each arm, the surface of which is continuous with the stipe below. The diaphragm at the top of the stipe is attached to the lower portion of the arms. Initially, the arms are joined together at the tips, but upon maturity they spread apart and curve slightly outwards, though some may remain joined together. The inner face of the arms is wrinkled horizontally across the surface and covered with the gleba. The arms are hollow and composed of 1-5 regular, thick-walled tubes.

Gleba: Olive-brown – becoming darker as it dries, thick, slimy and with a sickly faecal odour. Covers the dome and the inner surface of the arms.

Spores: 3-5.4 x 1-2.2 μ m, cylindric, smooth, olive green.

Habitat: Grows alone or in groups on the ground; often in lawns, gardens, in agricultural fields, under trees, on humus, woody debris, straw and even herbivore dung.

Notes: Lloyd, in his *Mycological Notes*, was one of the first to confuse *Lysurus cruciatus* with *Lysurus gardneri*, but he wrote later that he had been informed by Professor Petch that the arms of *Lysurus gardneri* are joined at the top and never free. He admitted that his concept of the genus was in error. Other mycologists since, such as Cunningham (1944) and Bottomley (1948) have also confused *Lysurus cruciatus* with *Lysurus gardneri*. Unfortunately, many people who have referred to their material have picked up and perpetuated this error.

L. cruciatus can be clearly identified by the fertile surface of its arms being wrinkled and running the entire inner length of the arm. The arms are usually free and may bend outwards.

The fertile surface of *L. gardneri* is quite shaggy in appearance and covers only the upper portion of the arm. The arms are almost always joined together at the top.