**Family:**
Sapindaceae


**Common name:**
Cooper's Puzzle

**Stem**
Usually grows into a small tree but also flowers and fruits as a shrub.

**Leaves**
Leaflets about 8-14 in the compound leaf, each leaflet blade about 11-17 x 3-4 cm, margins wavy, leaflet stalks about 0.5-1.5 cm long, swollen at their junction with the compound leaf rachis. Lateral veins about 12-16 on each side of the midrib, forming fairly distinct loops inside the blade margin. Compound leaf rachis upper surface with a rounded medial ridge and a groove on each side.

**Flowers**
Inflorescence about 10-20 cm long. Calyx lobes dimorphic, three large and two small, the larger lobes about 2-2.5 mm long. Petals about 1.5 mm long with two very hairy yellow glands on the inner surface and extending slightly beyond the tips of the petals. Stamens eight, staminal filaments hairy on the lower half. A green or yellowish green disk surrounds the base of the ovary and the stamens are inserted between the disk and the ovary. Ovary hairy, at least the upper half. Stigma 3-lobed.

**Fruit**
Fruits glabrous, about 20-30 x 20-30 mm, tapering to the base (and the persistent calyx lobes), ridged but not winged on the sutures. Capsules white to pink on the inner surface, glabrous or sparsely hairy but +/- villous towards the base. Seeds about 12-14 x 10 mm. Aril fimbriate at the apex +/- enclosing the seed but open along one side. Cotyledons green, one folded on itself or with a basal split and partly enclosed by the other larger cotyledon. Radicle small, lying adjacent to the margin of the smaller cotyledon.

**Seedlings**
Cotyledons mostly enclosed within the seed coat but are green and photosynthetically active. First pair of leaves glabrous, opposite, compound with two or three leaflets. At the tenth leaf stage: leaves compound, glabrous with 2-4 leaflets. Midrib raised on the upper surface of the leaflet blade and lateral veins forming loops inside the blade margin. Leaflet stalks swollen at the junction with the compound leaf rachis. Seed germination time 12 to 26 days.

**Distribution and Ecology**
Endemic to NEQ, known only from collections made on the eastern and south-eastern edge of the Atherton Tableland. Altitudinal range from 650-750 m. Grows as an understory plant in upland rain forest.

**Synonyms**
*Lepiderema sp.* (Cooper's Puzzle WWC 486), *Australian Tropical Rain Forest Trees & Shrubs* : (1999).

**RFK Code**
1089
Cotyledon and 1st leaf stage, hypogeal germination. © CSIRO

10th leaf stage. © CSIRO

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