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THE PUBESCENCE OF *LITHOSPERMUM CANESCENS*
AND *L. GMELINI*

HENRY S. CONARD AND CORNELIA CLARKE

Of the two short-tubed orange-yellow Puccoons of central Iowa, *L. canescens*¹ is found on every remaining fragment of upland prairie. It is completely destroyed by the first cultivation, and is rapidly depleted near towns by flower-lovers looking for the first spring blossoms. On bluffs of exposed loess soil we find rather rarely *L. Gmelini*. When the two are side by side they are easily distinguished by the pubescence of the leaves. That of *L. canescens* is noticeably finer and more copious than that of *L. Gmelini*. Each hair of the latter also stands on a tiny colorless papilla.

The expressions of this difference in the manuals are not all that could be desired. Gray Man. ed. 7 says "hispid with bristly hairs" for *L. Gmelini*, and "softly hairy and more or less hoary" for the other. Britton & Brown Ill. Flora ed. 2 says for *L. canescens* "hirsute, somewhat canescent, at least when young," and "hispid-pubescent or scabrous" for the other (called *L. carolinense*). Referring to the glossaries we find that "hispid" means "beset with rigid or bristly hairs or with bristles" (Gray) or "with bristly stiff hairs" (B. & B.) or "beset with rough hairs or bristles" (Jackson, B.D. Glossary of Botanic Terms). Hirsute means "with rather coarse stiff hairs" (B. & B.) or "hairy with long, tolerably distinct hairs" (Jackson). The descriptions therefore say nothing of the abundance of the hairs, unless the mention of canescence is so interpreted. Nor do they convey any sharp picture of the marked difference that appears on inspection of specimens. Like most short diagnoses, they are excellent for those who already know the differences.

By actual measurement the hairs of *L. canescens* in our region are about 0.6 mm. long and 0.16 to 0.35 mm. apart. The hairs of *L. Gmelini* are about 1 mm. long and 0.5 to 0.9 mm. apart. The former may be described as "softly hairy with abundant whitish hairs obscuring one-third to one-fourth of the leaf-surface." The latter (*L. Gmelini*) is "papillose-hispid with hairs obscuring about one-tenth of the leaf-surface." The whole story is made visible by

¹ The nomenclature of Gray's Manual is used.

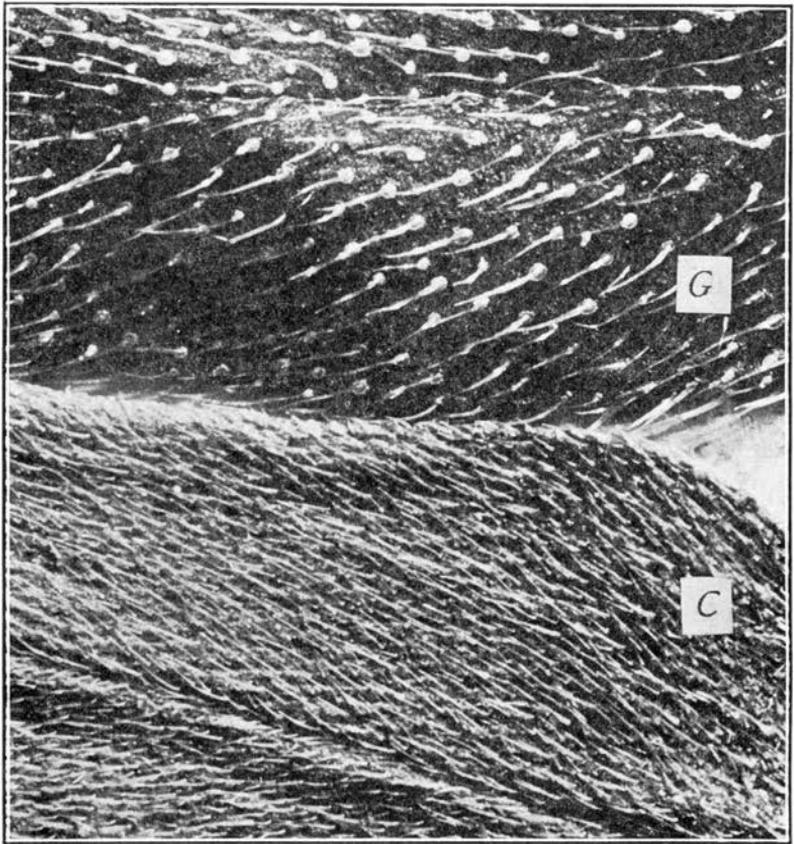


Fig. 1. Leaf surface of *Lithospermum Gmelini* (G) above; *L. canescens* (C) below.
From photo x 12 by Cornelia Clarke.

means of the accompanying photographic magnification of 12 diameters by the junior author. It is suggested that many comparative details of this kind might be made clear by photography.

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