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of the pedicels is frequent in the genus and at least until other more convincing differences are found this plant of Friedrichsthal may be provisionally placed as

B. KELLERMANII, forma **podocephala**, forma nov., formae typicae simillima differt capitulis graciliter pedicellatis; pedicellis 3-10(-20) mm. longis erectis vel adscendentibus.—GUATEMALA: *Friedrichsthal* (K., phot. and fragm. Gr.).

II. STUDIES IN THE BORAGINACEAE.

BY I. M. JOHNSTON

1. RESTORATION OF THE GENUS HACKELIA.

As currently taken the genus *Lappula* is composed of two sharply differentiated groups. It is here proposed that the perennial and biennial species with pyramidal gynobase be segregated to form the genus *Hackelia*, while the annual species with subulate gynobase be left to constitute the genus *Lappula*. The very important characters which separate these very distinct genera may be realized by a study of the following contrast.

LAPPULA. Annual; inflorescence abundantly bracteate; pedicels erect; gynobase subulate, 5-10 times as tall as broad, about equaling the nutlets; style surpassing the nutlets; nutlets narrowly attached all along the well developed medial ventral keel.

HACKELIA. Biennial or perennial; inflorescence naked or rarely sparsely bracteate; pedicels recurved or deflexed in fruit; gynobase pyramidal, less tall than broad; style definitely surpassed by nutlets; nutlets attached by a large oblique submedial ovate or deltoid areola; ventral keel extending over only upper half of nutlet.

As usually taken *Lappula* has been an unnatural aggregate formed of two groups whose structures are so different that it seems improbable that the groups are immediately related. The species which I have referred to *Hackelia* do not find their nearest relations among the species of true *Lappula*, but rather among the species in section *Coloboma* of *Eritrichium*. Indeed so close and unmistakable are the relations between *Hackelia* and *Eritrichium* that with much justification the two genera might be merged. On the other hand *Hackelia* has been referred to *Lappula* only because the species in both genera have glochidiate bristles on the dorsal rim of the nutlets, and despite the fact that the species of the two groups differ markedly in habit and in a number of fundamental characters. As both *Lappula* and