OBSERVATIONS ON THE FLORAL STRUCTURE OF *DYSSODIA TENUILOBA* (DC.) B. L. ROBINSON AND *MATRICARIA MATRICARIOIDES* (LESS.) T. C. PORTER (ASTERACEAE).

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A study made by the authors on the specimens of *Dyssodia tenuiloba* (DC.) B. L. Robinson and *Matricaria matricarioides* (Less.) T. C. Porter in the NLU Herbarium revealed some interesting morphological features.

With reference to *Dyssodia*, the pappus is unique and its description has varied from author to author. Small (1933) described the pappus as ".. of 10 or more partly united narrow scales" in *Boebera papposa* (Vent.) Rydb. (= *D. papposa*). He did not describe the pappus in *Thymophylla tenuiloba* (DC.) Small (= *D. tenuiloba*). Fernald (1952) described the pappus as "a row of chaffy scales, dissected into numerous rough bristles." Strother (1969) in his monograph on the genus described the various forms of pappus in *Dyssodia* as follows: ".. the pappus is relatively uniform, consisting of 15 to 20 squamellae, each dissected into several tawny bristles.....the outer series of squamellae is often reduced to a few erose, truncate scales....may have several merely aristate scales, five aristate scales alternating with five erose ones, or all the squamellae awnless and erose. In one taxon...the truncate scales are connate and form a shallow cup." Correll and Johnston (1970) described the pappus as "of 5 to 22 squamellae, muticous, 2-awned or dissected into several bristles; frequently both muticous and awned scales on the same achene." Cronquist (1980) said the pappus is "of 5-28 scales in 1-2 series, these sometimes (as in our spp.) cleft to below the middle into several bristles."

The following observations were made on the developmental sequence of the pappus in D. tenuiloba by Gandhi and Thomas: in the early stages, each segment of the pappus possesses a flat, short base and a long, dentate awn; in further development, at the base of the awn a lateral rudimentary outgrowth is seen on each side; each such lateral growth extends as a secondary awn but hardly reaching 3/4 of the main awn; very often these lateral awns become segmented. This study advocates that these lateral awns do not split from the main awn but arise independently as illustrated in figure 1.

In Matricaria matricarioides, the disk corolla is generally described as 4-toothed (see Fernald (1952) and Cronquist (1980). Although the above description is for typical flowers, the following observations were observed by the authors: the corolla mostly was 4-toothed but occasionally bore 5 teeth; further most of the corollas (in our specimens) were sheathed by a structure simulating a 'corolla.' This additional 'outer corolla' is 4- or 5-toothed, and is slightly constricted below the teeth. The basal part of this 'sheathing corolla' is dilated; hence, the actual corolla appears as winged. The tubular part of the actual corolla is free from the 'sheathing corolla'; however, the teeth of both the 'sheathing corolla' and the actual corolla are connivent as illustrated in figure 2.

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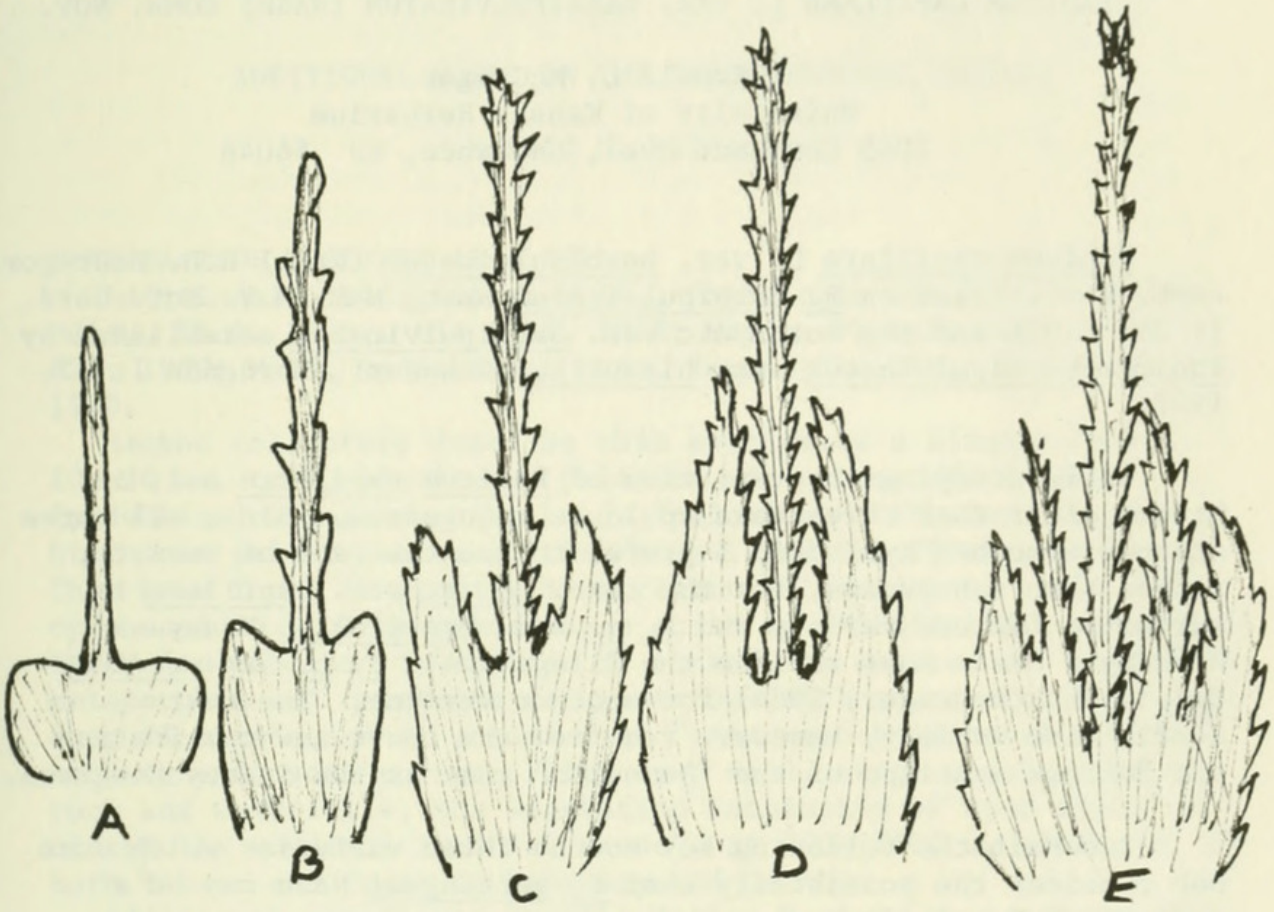

Figure 1: Dyssodia tenuiloba: A-E: Developmental sequence of pappus scale.

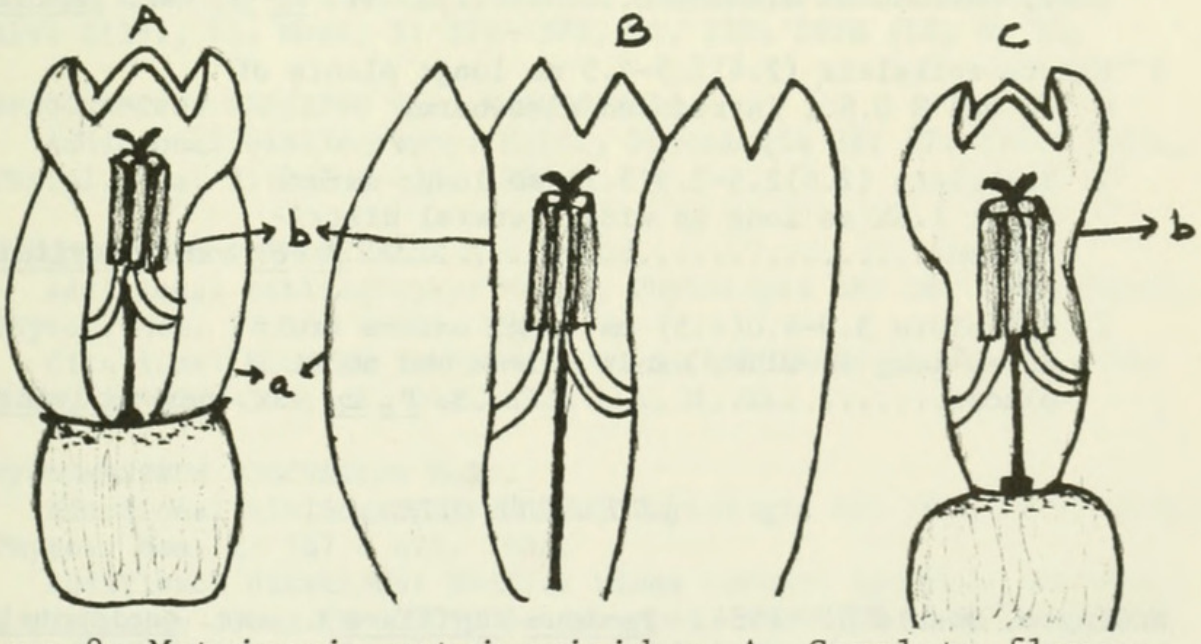

Figure 2: Matricaria matricarioides: A, Complete flower; B, Sheathing corolla spread out (note the 5 teeth); C, flower without sheathing corolla.
a. sheathing corolla; b. true corolla.