RESPONSE TO "THE *GERBERA* COMPLEX (ASTERACEAE: MUTISIEAE): TO SPLIT OR NOT TO SPLIT" BY LILIANA KATINAS

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My view is that *Chaptalia hintonii* is artificially segregated from sect. *Chaptalia*, removed from its relatives *C. lyratifolia*, *C. hidalgoensis*, *C. mexicana*, and *C. estribensis*, which appear to me as inseparably close in both geography and morphology. *Chaptalia pringlei* (also of sect. *Chaptalia* in my treatment) has only two whorls of florets (completely lacking an inner series of pistillate florets with reduced corollas) and apparently also would be rejected from *Chaptalia*, following couplet 6 in Katinas's provisional key to genera of the *Gerbera*-complex. Only two other species are in sect. *Chaptalia*: the generitype *C. tomentosa*, and its putative sister species *C. madrensis*, both of which share significant features with the other six. The few South American species sharing morphological features characteristic of sect. *Chaptalia* are reasonably suspected of relationship with North American sect. *Chaptalia* as much as with South American groups that Burkart and others have hypothesized.

Katinas notes that the transfer of *Chaptalia hintonii* was but the first step in adjusting various taxonomic boundaries within the *Gerbera*-complex. She has "found ca. 15 species included in *Chaptalia* that are best excluded from this genus (Katinas, in prep.), some of which probably are better placed within *Gerbera*" (p. 000). Presumably none of these 15 is among the other seven of sect. *Chaptalia* as I have recognized it. Perhaps some of them are in *Chaptalia* sect. *Lieberkuhna* (sensu stricto, incl. *C. graminifolia*, *C. mandonii*, *C. piloselloides*, and *C. runcinata*) and sect. *Loxodon* (*C. exscapa*) as Katinas's key (couplet 3) appears to corroborate my observation that those sections (combined) might be segregated at generic rank—plants of these species are "dimorphic," alternately producing chasmogamous and cleistogamous heads, similar to those in the genus *Leibnitizia*. The first lead of couplet 3, however, separates only *Leibnitzia*, suggesting that this aspect of biology in the *Lieberkuhna* and *Loxodon* species is not given the same taxonomic weight (or does it imply that she views *Lieberkuhna* and *Loxodon* potentially as members of *Liebnitizia*?).

With further consideration, Katinas concludes that morphology of the inner pistillate florets is "the most consistent, apomorphic character for circumscribing [*Chaptalia*]," i.e., for distinguishing it from *Gerbera*, lack of staminodes

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of lesser significance. She observes that *C. hintonii* has the relatively "longer, more developed corolla" (as does *C. tomentosa*, where mixed with shorter ones) more characteristic of *Gerbera* (she also notes that only part of *Gerbera* has three types of florets, while the other part has two types). But if these inner pistillate corollas show features of developmental intermediacy between the inner, bisexual florets and the outer, ligulate pistillate florets (as noted in my earlier comments), more pronounced development of corolla lips would not be unexpected, nor would the occurrence of staminodes. In any case, hypotheses of homology in these variable features in species groups on different continents seem tenuous, especially when they play a significant role in decisions affecting generic status.

Apart from geographic and morphological evidence, what is gained by transferring *Chaptalia hintonii* or any species of *Chaptalia* to "*Gerbera*," when it is explicitly recognized that *Gerbera* is "non monophyletic," "necessary to completely revise," and has at least the possibility that it "could be split in new, small genera"? *Chaptalia hintonii* apparently is positioned by Katinas within *Gerbera* in the area of infrageneric groups that do not include *Gerbera* sensu stricto, suggesting that the species probably would soon be transferred again to some other genus. Of course, this is only a tangential comment, as evidence indicates to me that the closest relationship of *C. hintonii* is with sect. *Chaptalia*.