

On page 41 Pierce says: "The majority of the hosts known are flower-frequenterers, and are classed as oligotropic when visiting a single species, genus or family of flowers, and polytropic when visiting many genera or families of flowers. It is very reasonable to infer that the most ordinary method of transfer of triungulids takes place at flowers, because of the analogous forms of strepsipterous and rhipiphorid triungulids. Most of the wasps are flower-visitors, because they can quench their thirst in the nectarine liquids. They are consequently polytropic; but the bees are more highly developed, and often specially adapted for particular flowers, hence many of them are oligotropic." Loew introduced these terms to distinguish bees like *Bombus*, which fly all season and visit a great variety of flowers, which he called polytropic, from bees like *Anthophora*, which have a short flight and visit comparatively few flowers, which he called oligotropic. He calls the females of *Halictus* polytropic, and the males, which appear late and fly a shorter time, oligotropic. In their visits for nectar bees resemble other flower-visitors, but in the visits of the females for pollen to provision their nests, bees show their essential bionomic relations to flowers and their essential differences from other insects. Therefore, being the first to use Loew's terms, at least in English, I limited the term oligotropic to bees which collect pollen from flowers of some particular natural group, and the term polytropic to those which use pollen from unrelated flowers. (Bot. Gaz., XXVIII, 27, 29, 1899) I have recorded 56 cases of these oligotropic bees. Of these only 20 are limited in their nectar visits also. Of 17 local stylopized Andrenidæ, only one is oligotropic in the sense used by Pierce. Most of the 20 are oligotropes of Compositæ. It is not so surprising that some of these are exclusive when we consider that at their maximum the Compositæ form 34 per cent. of the indigenous blooming flowers. I do not regard statements that a bee is oligotropic, unless made by a person who has made a great number of observations on flowers, and who distinguishes whether the females collect the pollen or not. Wasps have never been called polytropic except by Pierce. If these terms are applied to wasps, they should be used to distinguish wasps which provision their nests with insects of the same natural group from those which use an indiscriminate variety of insects for that purpose.

On flowers wasps are hardly polytropic in any sense. I have observed 1,949 flower visits of 208 species. The ones making 40 or more visits are: *Scolia bicincta*, 40; *Eumenes fraternus*, 41; *Polistes metricus*, 43; *Sphex vulgaris*, 46; *Myzine sexcincta*, 50; *Polistes variatus*, 51; *Sphex intercepta*,