

Scanning Electron Microscopy of Leaves and the Leave Galls from *Quercus arizonica* Sargent (Fagaceae).

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The galls are structures originated because of the pathologic development of cells or tissues from plants due to the influence of parasites organisms [1]. Some vegetal taxonomic groups present a rich fauna of galling, and others present low percent of infestation or never get infest. The genus *Baccharis* (Asteraceae) is an excellent example, for the neotropical flora, since they present a high richness of insect galls [2], on the other hand for the mild regions *Quercus* (Fagaceae), is one of the most representatives genus [3,4]. The main objective of this work was to characterize the leaves and the leave galls from *Q. arizonica*. The samples, coming from Durango (Mexico), were prepared for the morphological analysis [5] and observed in a Scanning Electron Microscope (Jeol-5910LV). In the leaves were observed stellate trichomas in the abaxial surface (10 arms, Fig. 1A) and in the adaxial (8 arms, Fig.1D). The abaxial surface presented epicuticular wax in plaques and stomatas (Figs. 1B and 1C), while in the adaxial surface the wax presented a crust type; there were not observed stomatas. (Figs. 1E and 1F). The galls from *Q. arizonica* occur in the abaxial surface of the leaves, showing a conical shape, with 4 mm high and brown color (Fig. 1G). Externally, the galls presented glandular trichomas (Figs. 1H and 1I) covered with crust type wax similar to those that occurs in healthy leaves (Figs.1I and 1J). Internally, the galls present a cavity divided in 2 parts, the larval chamber and an exit channel (Figs. 1K and 1L); presenting trichomas similar to those observed externally to the gall (Figs. 1M and 1N). The tissues observed, from the one closer to the larval chamber to the external one, were nutritive (Figs. 1O and 1P), parenchymatic (Figs. 1O and 1P) and epidermis (Fig.1R). The occurrence of different trichomas and the galls tissue distribution were corroborated with the observations in a previous study [6].

References

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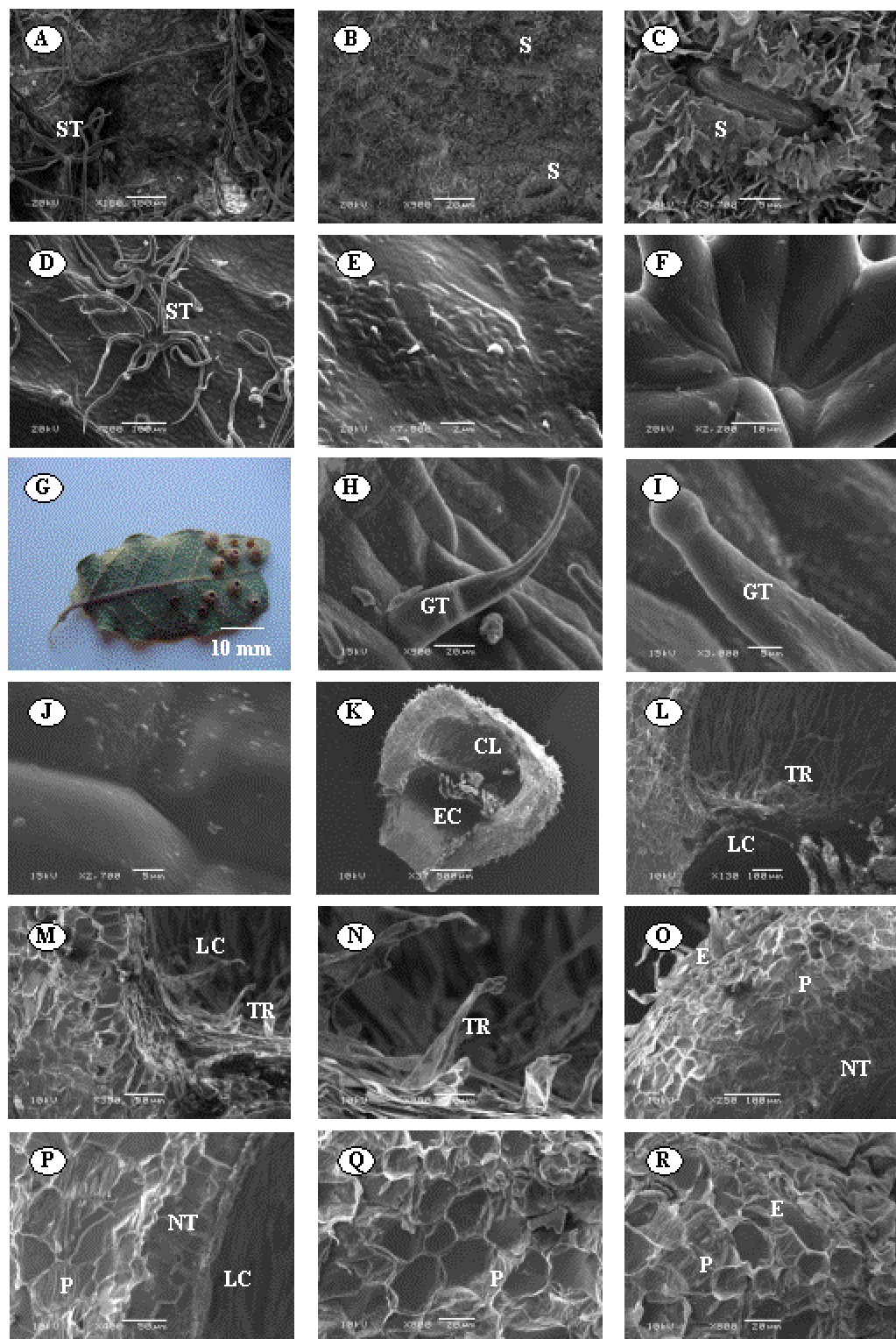


Fig. 1. Scanning Electron Microscopy of leaves of *Q. arizonica* (Fagaceae) 1A – 1C abaxial surface and 1D – 1F adaxial surface; 1G external view of the conical gall of *Q. arizonica*; Scanning Electron Microscopy of the leaves galls of *Q. arizonica* 1H – 1J externa section, Fig 1K – 1R interna section.

ST = stellate trichoma, GT = glandular trichoma S = stomata, LC =larval chamber, EC = exit chanel, NT = nutritive tissue, P = parenchyma, E = epidermis.