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Morphological Study of Leaves from the Hybrid System *Quercus conzattii*, *Q. eduardii* and *Q. conzattii* X *Q. eduardii* (Fagaceae) in México.

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Quercus is one the most important genus of plants in the Northern Hemisphere with a wide distribution. The genus is typical from the mild climate, but also occur in the mountain from tropical and subtropical regions of Asia and Latina America. Around the World there are about 450 different *Quercus* species, and in Mexico there are from 135 to 150 species [1], from which several of them present hybridizing systems. The objective of this study is to analyze the morphological characteristics of the leaves in the parental species (*Quercus conzattii* and *Q. eduardii*) and the hybrid specie (*Q. conzattii* X *Q. eduardii*). Samples from species taken in the states of Oaxaca and Durango (México) were prepared for the morphological analysis [2] and observed in a Scanning Electron Microscope Jeol (5910LV). The surface abaxial of the leaves from the three different species presented stellate trichomas. *Q. conzattii* and the hybrid specie present a similar number of arms, while *Q. eduardii* present a higher number than that observed in the anterior species (Figs. 1A – 1F). Similar stomatas were observed in the three species (Figs. 1G – 1I). The trichomas from *Q. conzattii* presented film-type epicuticular wax and in the other two species wax in the shape plate were observed (Figs. 1J –1L). Now, in the adaxial surface only the stellate trichomes were observed in *Q. eduardii* and in the hybrid specie, with differences in the number of arms that is higher in the parental specie (Figs. 1M and 1N). The epicuticular wax that cover the trichomas from this surface has the same type than that occurring in the surface abaxial. *Q. conzattii* presented wax of a crust type similar to that observed hybrid specie, and *Q. eduardii* presented plate shaped wax (Figs. 1Q – 1S). Only the hybrid specie presented stomatas in both surfaces (Figs. 1I and 1S). With the obtained results in this work, can be concluded that the morphological characters constitute a useful tool to evaluate the hybrid systems. However, is necessary to associate the investigations from the genetic and ecological ambit.

References

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[2] M. A. Hayat, Principles and Techniques of Scanning Electron Microscopy Biological Applications, New York, USA: Van Nostrand Reinhold Company,1983.
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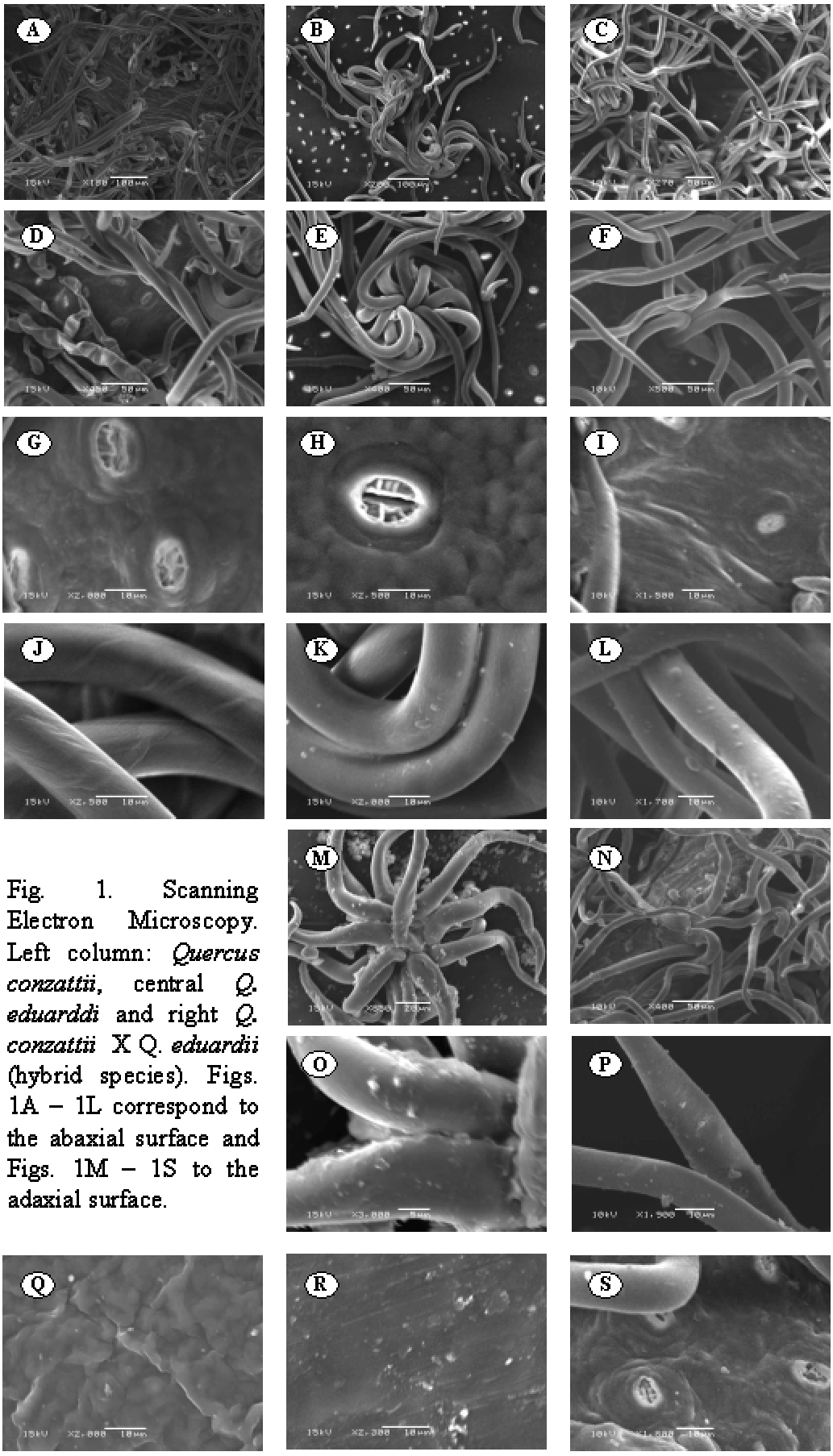

Fig. 1. Scanning Electron Microscopy. Left column: *Quercus conzattii*, central *Q. eduarddi* and right *Q. conzattii* X Q. *eduardii* (hybrid species). Figs. 1A – 1L correspond to the abaxial surface and Figs. 1M – 1S to the adaxial surface.

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