**Introduction**

Tortricidae is a large family (>10,000 species) distributed worldwide (Gilligan et al. 2010).

Cornuti are sclerotized (hardened) features attached to a membranous structure called the vesica, which is inside the phallosome. During copulation, the vesica everts out of the phallicus and fills the ductus and corpus bursa of the female. The function of cornuti is unknown although they are thought to be taxonomically important.

**Materials and Methods**

All specimens for this study were obtained from the Department of Entomology at the Smithsonian National Museum of Natural History. The presence/absence and type of cornuti were recorded for each of the approximately 4,000 specimens examined.

We define a cornutus to be any sclerotization on the vesica, and have identified the following five categories:

- **Aciculate**: long and slender; apically pointed; with or without a distinctly socketed base.
- **Plate-like**: irregularly shaped sclerite; usually with rounded edges.
- **Orbiculate**: small, flattened, and rounded; sub-basally attached and deciduous; observed in few taxa.
- **Basal Attachment**: the point of attachment to the vesica.
- **Sub-Basal Attachment**: the point of attachment to the vesica.

**Conclusions and Further Research**

This study provides morphological evidence for the relationships shown by the molecular phylogeny using one character.

Ancestral Tortricines that developed non-deciduous cornuti radiated into the clad that formed present-day Cochylinae+Eulinae+Tortricinae.

Cornuti are highly conserved in some groups (in number, type, and configuration), but in other groups the number of cornuti is not always identical among members of the same species. Cornuti therefore vary in their reliability as taxonomic characters.

Much is still unknown about the function and ontogeny of the different types of cornuti. A more in-depth analysis of the trends in presence/absence and type of cornuti at the species level is in progress.

**Acknowledgements and References**

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Cochylini+Euliini and Cnephasiini+Tortricini.

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