

Palynomorphs in the Christian relic of the Sudarium of Oviedo

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In 2014 we opened up new palynological research on the cloths of the Sudarium of Oviedo, in the quest to find data at a taxonomic level and confirm the presence of pollen from ancient times.

In previous research in 1994, the palynologist Gómez Ferreras identified palynomorphs from vacuumed powder; these were acetolysed and observed under an optical microscope, thereby discovering 141 pollen types. In 1994, using a method of vacuum and a special adhesive tape, new powder was collected, which at the present time is being analyzed with scanning electron microscopy. A notable discovery was the types of Apiaceae (Fig. 1), as well as types of *Pistacia* spp. (Fig. 2) covered with greasy substances and immersed in dissolved frankincense. An interesting sample was collected directly on a stain of blood, showing only one type of Asteraceae, which was found to be totally adhered to the blood, suggesting that flowers or some product were used when the blood was fresh. This kind may belong to the genus *Helichrysum* (Figs. 3, 4) (Boi, 2012), a type that had previously been wrongly identified as *Gundelia tournefortii* (Frei 1982, 1983; Danin *et al.*, 1999).

This last finding could help to relate the fabric of the Sudarium to the Shroud, because this latter relic also shows a high presence of entomophilous pollen. The *Helichrysum* type and other entomophilous kinds were associated with resins, gum and oil used in ancient funeral rituals, according to Pliny the Elder and Dioscorides. The employed of botanical products to honour the dead was abandoned during the 3rd century A.D., because of the situation at that time in Asia Minor and Europe. For this reason, the finding of pollen can help also to date the Sudarium of Oviedo, as well as, in the future, the Shroud of Turin.

Fig. 1

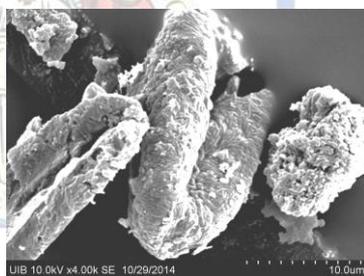


Fig. 2

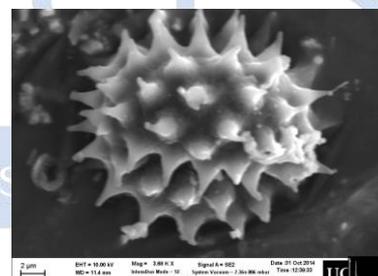


Fig. 3

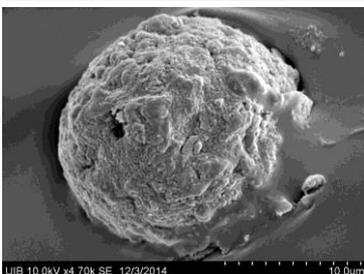
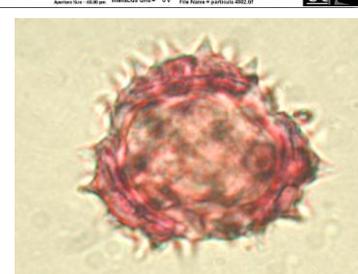


Fig. 4



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