

## A simple dusting device for coating orb webs for field photography

James E. Carico

Biology Department, Lynchburg College,  
Lynchburg, Virginia 24501, U.S.A.

Field photography of spider webs has historically been a major problem for which many solutions have been offered; usually awkward, messy, or both. The problem, of course, is how to make the fine threads more visible which usually means they must be coated to make them thicker. The solution proposed by Eberhard (1976) involving the use of cornstarch that adheres to the naturally sticky areas of the web has been a major development and does not have the undesirable characteristics accompanying such techniques as spray paint. However, a more efficient and controllable method for dispensing the cornstarch was needed rather than that of patting a sock bag filled with the powder.

I have successfully used a small, portable device (Fig. 1) to apply cornstarch which has distinct advantages. It consists of three components common in most laboratories or easily obtainable from scientific supply houses. They are:

- (1) Rubber pipette bulb, 30 ml capacity. Bulbs are available in a variety of sizes and shapes.
- (2) Common "medicine" dropper pipette. There are a variety of styles used in the pharmaceutical industry. Mine was included in a shipment of commercial protozoan cultures used in the teaching laboratory. Usually they are made of glass, but H. W. Levi (pers.comm.) has used plastic ones to achieve unbreakability of the whole unit. Caution must be taken to make sure that the aperture in the tip is very small so that no large clumps of starch will go through.
- (3) Rubber bulb for the pipette. This is used only to seal the unit from leaking cornstarch into the pocket or collecting bag and to keep moisture from getting to the starch. It is pushed all the way down over the open end of the pipette.

To charge the unit for operation, fill the bulb approximately to the level shown in Fig. 1. I carry a reservoir of cornstarch in a catsup (ketchup) dis-

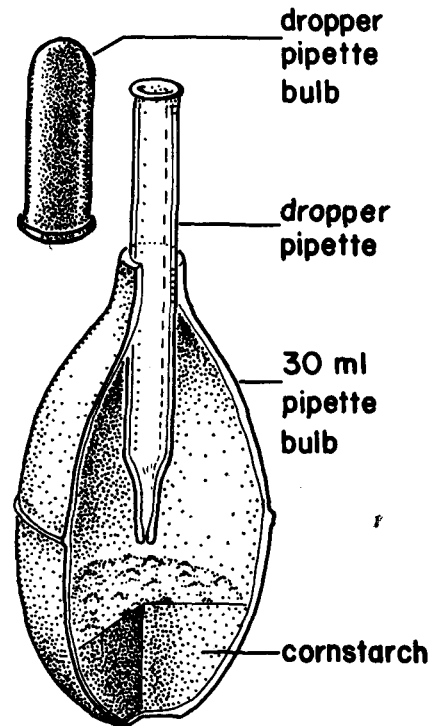


Fig. 1. Device for applying cornstarch to orb webs. An aid in field photography. One-fourth of the assembled device is cut away to show internal features.

penser with a nozzle tip. The bulb is filled by inserting the nozzle in the open end of the large rubber bulb and "squirting" cornstarch into the chamber.

The cornstarch is applied by aiming the pipette towards the web and squeezing alternately on the bulb to expel gentle puffs of cornstarch. It works best when it is held at a position near the vertical and functions satisfactorily down to 45°. The amount of starch expelled can be regulated by the distance that the pipette is pushed into the bulb. This may become necessary as the level of starch diminishes during use. Experimentation may be required to determine the optimum depth.

The "duster" can be carried easily in the pocket or collecting bag, and when combined with a reservoir of cornstarch, it is extremely fieldworthy for short or long trips.

### Reference

- EBERHARD, W. G. 1976: Photography of orb webs in the field. *Bull.Br.arachnol.Soc.* 3(7): 200-204.