

In a recent paper, Cooke (1970) has summarised various methods and problems involved in the clearing of the vulvas of female spiders. All except Levi's technique have in some way damaged the whole spider or necessitated removing the genitals from the specimen; they are also lengthy in operation. A new technique is presented here which can be carried out fairly quickly and causes minimum damage to the specimen. It consists of injecting into the female genital region a fluid which macerates the soft tissues around the vulva.

MATERIALS A sensitive mouth-operated syringe is used to inject the specimen. It consists of a short length of 4 mm diameter glass tubing, drawn out into a fine point and connected to a mouthpiece by a length of thin rubber tubing. With practice a high degree of control can be exercised over the fluid being injected. Various clamps were tried but it was found that the syringe could be best manipulated when held in the hand.

After preliminary experiments with various reagents on different specimens 15% caustic potash was found to be the most suitable clearing medium. The whole procedure is carried out on the stage of a low power binocular microscope.

METHOD The spider is examined in 70% alcohol; it is then removed and placed on a small piece of white absorbent paper which dries off the excess alcohol. The syringe is filled by suction with about 0.5 ml of the clearing fluid. While the spider is steadied with a small brush the point of the syringe is introduced under the posterior edge of the epigyne and moved forward until in the vulval region. When clearing is complete (this can usually be observed through the microscope), as much of the injected fluid as possible is removed with the syringe. The spider is then placed in alcohol to remove the rest of the injected fluid and finally transferred to fresh alcohol for examination. With practice the whole operation can be carried out in two to three minutes.

RESULTS The technique has been applied successfully to a wide range of species from the families Linyphiidae, Theridiidae, Lycosidae, Thomisidae and Clubionidae. It works most successfully with weakly pigmented species, although excellent results have been obtained with some heavily pigmented species such as Lycosids. It is hoped that this short note will encourage further experimentation so that the technique can be better evaluated.

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REFERENCES

- COOKE, J.A.L. 1970: Mounting and clearing; Notes on some useful arachnological techniques. Bull.Brit.Arach.Soc. 1 (6) : 92-95.