Economical Tools
by James C. Cokendolpher
Mounting pins, minutem nadeln, and concoidal chips from the edges of razor blades on matchsticks or applicator sticks* has long been a method of preparing microdissection and micromanipulating tools. In my experiences, I have found such tools superior to commercial available items. Not only are they economical but a multitude of probes and scalpels can be fashioned, each with specific design features. The method by which the tool tip is mounted to the stick is as variable as the tool itself. In an effort to reduce time in preparing such tools, I tried a variety of glues and adhesives. I now use epoxy glue (epoxy and polyamide resins) exclusively, as they harden relatively fast, are insoluble in alcohols under normal working conditions, and hold tight. This latter point is especially important when working with hard-bodied harvestmen or scorpions. The matchstick will break before the tip is loosened in difficult dissections.

Epoxy glue is also very useful in the construction of well slides. To a plain glass slide I construct cells by running a circle of the glue and allowing it to harden (Fig. 1). Deep cells can be constructed by using several coats of the glue. The diameter of the cell can be as large or small as one anticipates future needs. Square cells can be constructed and are useful when square cover glasses are used to cover the preparation. In my experience, the brands of epoxy which harden rapidly (less than 10 minutes) do not adhere to the glass as tightly. Well slides are ideal for examination of small specimens or structures which need to be placed in a media to enhance their clarity. Epoxy glue appears not to be altered by commonly used media. I have used several grades of ethyl and isopropyl alcohols, acetic-methanol, clove oil, lactophenol, lactic acid, and glycerine. I currently have slides which have held clove oil and lactophenol for over a year with no apparent effect on the resins.

Unfortunately, the epoxy glues which I have tried do not withstand boiling water; therefore, other mounting media will be needed for sterile dissections. Well slides constructed with epoxy glue are quite modest in cost; and if broken, they can be replaced the next time resins are mixed to construct new scalpels and probes.

*Applicator sticks are of wood, round, 3/32" diameter, 6" long; from medical suppliers.

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A Spider with Seven Eyes!
by Lawrence Jones-Walters
Sorting through large numbers of spiders, collected during extensive survey, usually results in the discovery of a few aberrant specimens. These are mainly gynandromorphs or intersexes, but can be even more unusual, as illustrated by Merrett (1983), who describes a spider with two epigynes.

Amongst thousands of specimens collected by Dr. David Sheppard, of the Nature Conservancy Council, during a survey of various sites on the Lizard Peninsula, were several Erigonidium graminicola (Sundevall). They were all beaten off Prunus in July, and would have been thoroughly preserved specimens should be kept away from light because of extreme bleaching. Most spiders had also been exposed to light for a period between 10 to 20 years as they were stored on an open shelf. The Belgian Reference Collection of African spiders conserved in the same fluid, strangely enough, did not show any sign of bleaching. It thus became clear that the specimens were bleached by the influence of light.

Reference

The Nature Conservancy Council, Calthorpe House, Calthorpe Street, BANBURY, Oxon OX16 8EX.

Preserved specimens should be kept away from light by R. Jocqué

Studying an interesting reference collection of Belgian spiders made in the sixties, I had the disappointing experience that some of the specimens proved to be unidentifiable because of extreme bleaching. Most spiders had become white or translucent and in many cases even hard sclerotised parts were completely discoloured so that it was impossible to see the shape of crucial sclerites. I initially thought that the bleaching was due to the preserving fluid, being 70% alcohol denatured with camphor. Old collections of African spiders conserved in the same fluid, strangely enough, did not show any sign of bleaching. It thus remained until Dr. Baert of the “Koninklijk Belgisch Instituut voor Natuurwetenschappen” informed me that he was faced by the same problem with spiders that had been stored for several years on an open shelf. The Belgian specimens had also been exposed to light for a period between 10 to 20 years as they were stored on a shelf near a window whereas the African collection was stowed away in closed cupboards. It thus became clear that the specimens were bleached by the influence of light.

Fig. 1: Double well slide, top and cross sectional views, epoxy resin cell walls depicted in black.

Unfortunately, the epoxy glues which I have tried do not withstand boiling water; therefore, other mounting media will be needed for sterile dissections. Well slides constructed with epoxy glue are quite modest in cost; and if broken, they can be replaced the next time resins are mixed to construct new scalpels and probes.

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