

Reflections on viewing Lepidoptera Specimens: A Mirror Device

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It can be a challenge to compare the wing pattern details on the ventral and dorsal faces of several moth or butterfly specimens, particularly as we age and our short term memories begin to fail. A simple mirror device that permits one to view dorsal and ventral faces of several specimens simultaneously greatly reduces those difficulties. The device is constructed by drilling holes into a mirror, which then is placed on top of a piece of pinning foam or, for safety sake, has been cut to fit into a container that has a pinning foam bottom. The mirror shown in Figure 1 was cut to fit a 4-3/8" x 7-5/16" Cornell style unit tray, and it has eight holes arranged in two rows. That size works well for three or four medium-sized specimens (e.g., *Anartia*, *Hamadryas*), or eight small ones (e.g., *Anthanassa*, *Janatella*). Obviously, comparison of large species (e.g., *Caligo*) would require a much larger mirror, perhaps one cut to fit into an insect drawer. The author found these devices indispensable during the process of identifying several drawers of *Adelpha* specimens.

Specimens pinned into a mirror are best viewed from one side, i.e., with the specimens arranged in a row (rather

than a column), with the bodies perpendicular to the observer (Fig. 1), who then tilts the mirror slightly to bring the ventral faces into view, and scans the specimens side to side. From that perspective the distance from the eye to any given specimen is nearly identical, thus greatly reducing the need to continuously re-focus the eyes and maintain details in short term memory. Pattern differences are easy to spot, and seem to jump into view.

The mirrors were purchased from, and cut and drilled by a local glass-cutter, who used paper templates prepared by the author. To prepare a template: 1) Select the container into which the mirror must fit; 2) install pinning foam in the container if it does not already have it; 3) cut a piece of white paper to fit into the container; 4) pin the specimens through the paper and into the foam to mark the locations of holes. To ensure an accurate fit, it is recommended that the container(s), not just the paper template(s), be brought to the glass-cutter.

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Figure 1. Specimens of four species of *Adelpha* (Nymphalidae) pinned into a mirror tray that permits the simultaneous viewing of dorsal and ventral wing surfaces.

