

Efficient removal of insect specimen pin labels with modified forceps

Rod Eastwood

*Museum of Comparative Zoology, Harvard University, 26 Oxford Street,
Cambridge MA 02138*

With the push to digitize natural history collections worldwide, museums are facing new challenges regarding funding, personnel, and the technology required for large-scale digitization projects. This is particularly so in entomology collections where the digitization task is daunting because of the huge numbers of insects. For example, estimates of insect holdings in some US institutions, from their websites, include the Smithsonian National Museum of Natural History (>35 million), American Museum of Natural History (17 million), and the Museum of Comparative Zoology (MCZ) at Harvard University (7.5 million). Digitizing these three insect collections alone, assuming 1 minute of handling time per specimen would require more than 587 person-years.

New methods and tools are being developed to facilitate digitization processes, such as innovative software, automated text scanning, and digital imaging of drawers or individual specimens. Often overlooked, however, are ancillary jigs and tools that can also reduce handling time in certain situations, thus minimizing damage to fragile specimens, which is an important consideration.

In many cases, digitization of insect collections requires the removal of pin labels for the retrieval of specimen data via imaging or other means, and for reasons of cost, is often performed by unskilled (non-entomologist) personnel. Removing pin labels from insect specimens can be difficult at best but, if pin labels are not gripped evenly on both sides of the pin, the label can jam on the pin making it very difficult to remove (= time consuming) or, worse, may result in a torn label or a damaged specimen. These problems may be exacerbated when attempting to remove old labels from bent, corroded, or broken pins.

In developing protocols for digitizing the butterfly collection at the MCZ, we considered several methods of removing pin labels that would be easy to use and minimize specimen damage. Our preferred method was to use a pair of modified spade pointed philatelic forceps as shown in Figure 1. Spade pointed forceps were designed for handling postage stamps and come in two basic shapes, either straight or bent. We chose the bent variety and modified them by cutting a 'V' shaped slot down the center of the spade using a small hacksaw and then filing the edges smooth. The slot was extended further on the lower spade point of

the forceps for better location and alignment on the pin (Fig. 2). This was necessary because the angled end of the forceps causes the lower spade to project beyond the upper spade when in the open position (Fig. 2). Importantly, the angled end of the forceps ensures that an operator's fingers are positioned away from the insect specimen thus minimizing contact damage, and it is easier to position the forceps above and below the pin labels (Fig. 2).

A single 'V' slotted 'spade' could do a similar job if it were positioned above the labels and dragged down the pin causing the labels to slide off. However, the relative order of labels could get mixed during the removal process and so information inherent in their chronology (i.e. the oldest data are on the top label) might be lost. Gripping evenly above and below the stack of labels with forceps minimizes the potential to mix label order after removal, helps maintain the integrity of often fragile labels, and is a safer and more efficient way of holding the labels prior to processing.



Fig. 1

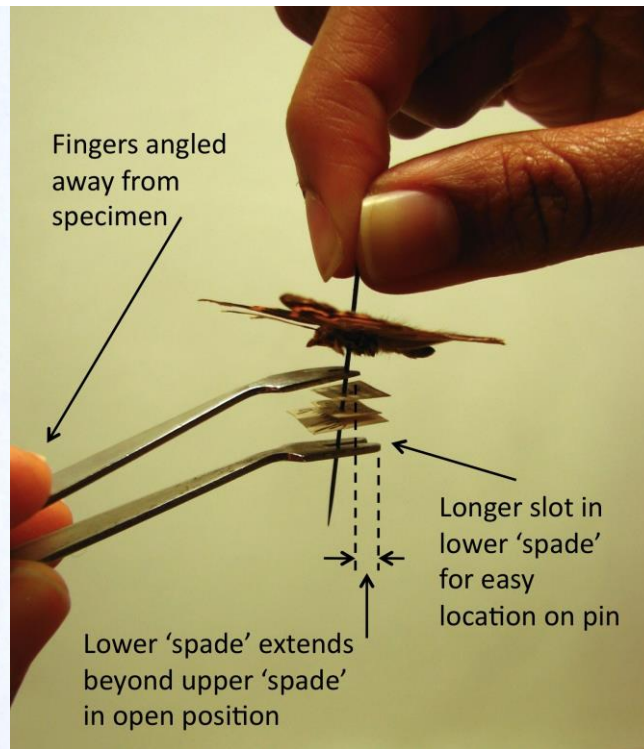


Fig. 2