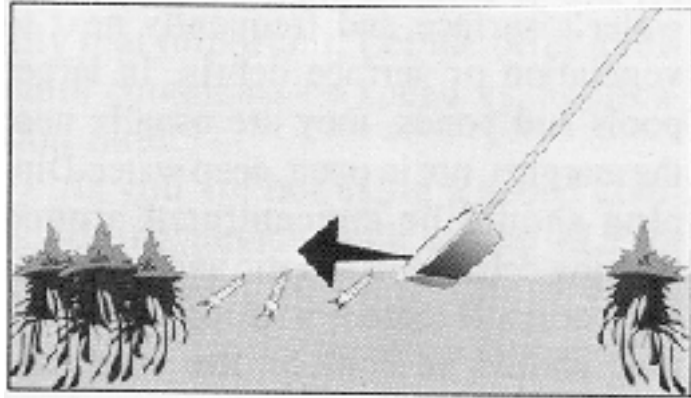


Seven Ways to a Successful Dipping Career

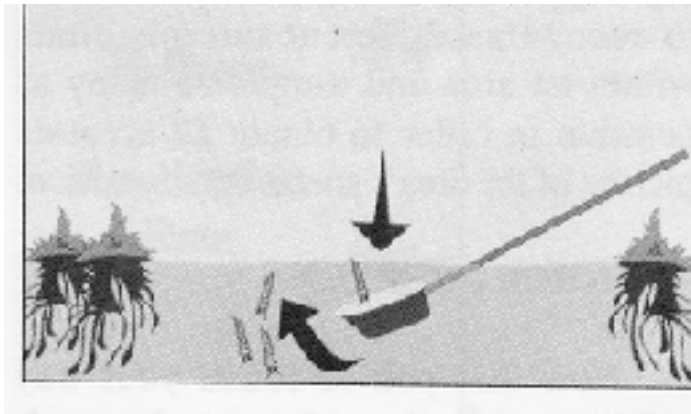
CLAUDIA O'MALLEY

1. The first and usually the best method to start with is the SHALLOW SKIM. The shallow skim consists of submerging the leading edge of the dipper, tipped about 45 degrees, about an inch below the surface of the water and quickly, but gently, moving the dipper along a straight line in open water or in water with small floating debris.



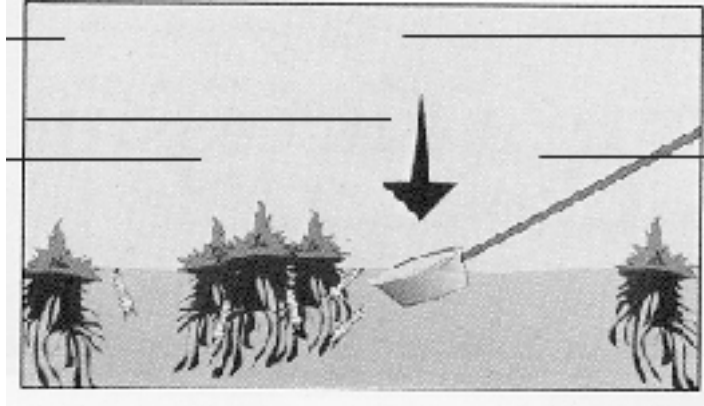
End the stroke just before the dipper is filled to prevent overflowing. The shallow skim is particularly effective for *Anopheles* larvae that tend to remain at the surface longer than *Aedes* and *Culex*. *Anopheles* are usually associated with floating vegetation and debris.

2. The second method to try in open water, with or without floating objects, is the COMPLETE SUBMERSION. Many mosquito larvae, particularly those of the genera *Aedes* and *Psorophora*, are very active and usually dive below the surface quickly if

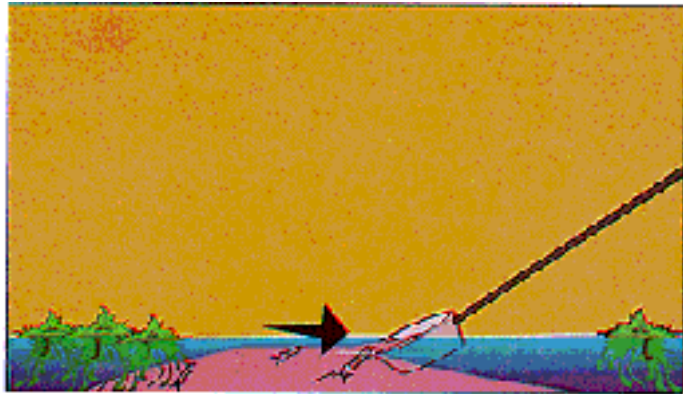


disturbed. In this case, a quick plunge of the dipper below the surface of the water is required, bringing the dipper back up through the diving larvae. Bring the dipper up carefully to avoid losing the larvae in the overflow current.

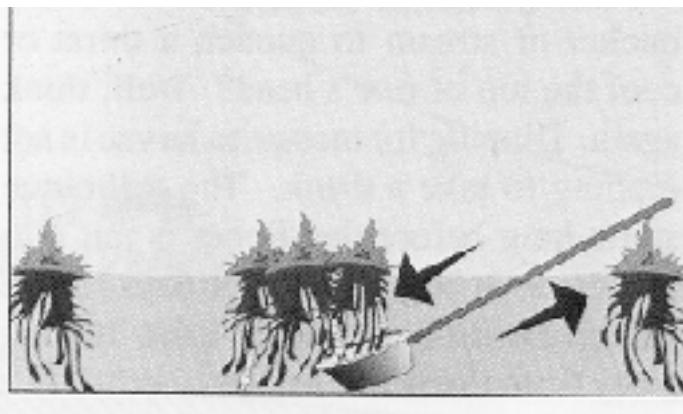
3. When you need to sample at the edges of emergent vegetation, try the PARTIAL SUBMERSION technique. To do this, push the dipper, tilted at about 45 degrees, straight down adjacent to the vegetation. This causes the water around the vegetation to flow into the dipper, carrying the larvae with the flow. There is no need to move the dipper horizontally. Pull the dipper up before it is full.



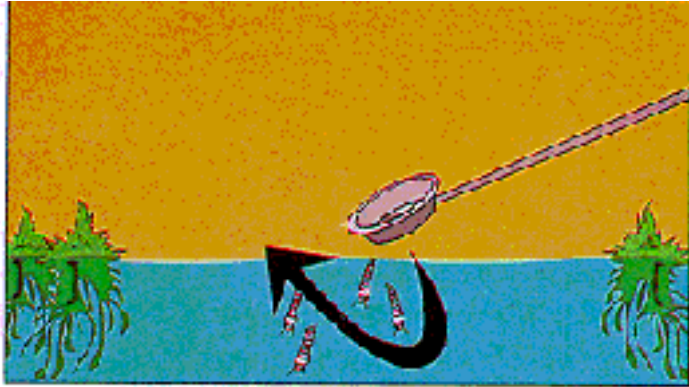
4. In very shallow water, try the FLOW-IN method. Larvae can be collected by pushing the dipper into the substrate of the pool and letting the shallow surface water, debris and larvae flow into the dipper. Do not move the dipper horizontally.



5. To sample for larvae that may be under floating or emergent vegetation, use the SCRAPING technique. This method is used in habitats that contain clumps of vegetation such as tussocks of sedges, floating mats of water lettuce or clumps of submerged vegetation. Dip from the water in towards the vegetation and end by using the dipper to scrape up against the base or underside of the vegetation to dislodge larvae. This method is usually more effective if the bottom of the dipper is screened and it is often used to sample for *Coquillettidia* and *Mansonia* mosquitoes.

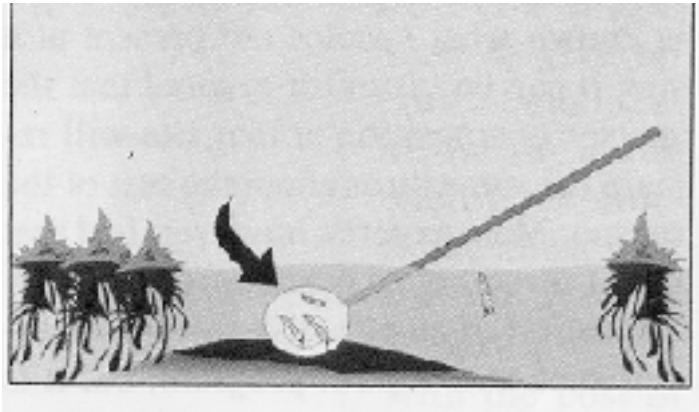


6. The SIMPLE SCOOP is the "dipping to get water" method that was discouraged earlier. It consists of simply scooping a dipperful of water. This is probably the most commonly used method, particularly by new inspectors, and it is often the method referred to in much



of the literature as "the standard dipping procedure." While it can be successfully used to collect *Culex* larvae, it is still not the method of choice.

7. The dipper can also be used as BACKGROUND. This is especially useful in woodland pools and other shallow water or when larvae are disturbed and dive to the bottom. Submerge the dipper completely to the bottom litter and slowly move it around. The darker



mosquito larvae and pupae will stand out against the background of a white or aluminum dipper. Once larvae appear in the dipper, just lift it upward.