



ANIMAL CARE/HANDLING PROTOCOL: MONARCH TEACHER NETWORK OF CANADA/TRCA *Danaus plexippus Specimen Collection and Care (Standard)*

HANDLING PROTOCOL

Handling of livestock at any stage should be minimized. If handling is necessary, the please follow the protocol below:

For all life stages, ensure that your hands are free from lotions, repellants, and/or soaps as these are often impactful to the Monarch. Wash and dry your hands well.

EGG STAGE

Never touch the egg directly. Remove the leaf upon which it is sitting (from the Milkweed plant) and transport it to a container where it can sit undisturbed until it hatches. Ensure that the stem of the leaf is wrapped in paper towel and kept moist.

YOUNGEST INSTARS (*first, second, and even third*)

These instars are very fragile! Touching them directly should be avoided for the safety of the caterpillar. Ensure that the instars always have fresh food milkweed. It is safest for the caterpillar to leave it on the leaf upon which it is stationed, and set fresh leaves into the container. Attempting to move a motionless caterpillar by prodding may disturb the molting process and injure the caterpillar – it is best to allow it to move on its own. Remove frass from the container daily.

OLDER INSTARS (fourth and fifth instars)

These instars are hardier than the younger instars, but it is still best to minimize handling. It is not uncommon to see these larger caterpillars on “walk-a-bouts”, which may demand their retrieval. The safest way to collect them is to allow them to crawl onto a leaf or piece of paper, and then return them to the safety of their holding cage/container by allowing them to crawl off of the paper or leaf onto a milkweed plant. **Never** try to pick them up by rolling them or pinching them in your fingers.

PRE-PUPAE AND CHRYSALID

When the caterpillar is going into the “J”, be careful not to touch, move, or disturb it.

If the chrysalid can remain safely where it has attached, leave it.

If it must be moved, create a slipknot in a piece of unflavoured dental floss, and slip it up to the point of attachment (where the cremaster hooks into the silk). Gently tighten and secure the knot. Do not tie

the knot lower on the cremaster – touching the “silk” is best, and should ensure that there is not damage to the forming adult.

ADULTS

When adults emerge they are very fragile! DO NOT TOUCH or try to move them, as they need time to expand their wings fully, dry, and “zip” together the two pieces of the proboscis. It is best not to handle them at all on their first day as an adult unless absolutely necessary.

When handling adults, (again, wait 24 hours after emergence) keep in mind that each contact will remove scales from the Monarch’s wings – handling should be minimized. To safely transfer the adult from one cage to another, cupping both hands around the adult is appropriate. For feeding the adult, you should use the *four-pinched-wings method* – gently pinching all four wings between the middle finger and thumb, and arch the first finger in front of the Monarch upon which it can crawl. If the butterfly is not in a position to crawl onto a finger, gently ease it from its perch – **DO NOT PULL**, as you could cause injury to legs or clasps on the feet. Hold the Monarch so that its feet are in the puddle of sugar water, which will prompt them to unfurl the proboscis and draw up the sugar water. Allow them to feed until they retract the proboscis naturally, typically about two minutes.

If Monarchs are not being released immediately (should be released within 24 hours so that they can feed naturally), you must be prepared to feed them twice per day, and provide water for puddling. Though fruits or flowering plants may provide the nutrients they need and can be left in the holding cages, a sugar water mixture can be prepared (5 parts water: 1 part sugar) for them.

ADDITIONAL NOTES:

Ensure that adults are released in an area safe from cars, roads, or activities that could cause injury while they are re-orienting to the new environment.

	Stages and maximum quantity collected (wild)	Time in Captivity	Care Protocol
Workshop	Eggs (3-5), caterpillars (all instars (10)), chrysalids (2-3), adults (2-7)	1-2 weeks from collection to workshop (released on last day of workshop, or as the adults emerge)	Containment in rearing and holding cages, with appropriate space, air movement. Daily removal of frass. Daily replacement of fresh milkweed. Adults (bi-daily) feeding with appropriate sugar solution and/or fruit/nectar sources. Handling for training purposes only after proper instruction on appropriate handling techniques.
Classroom	Eggs (2-3), caterpillars (all instars (5)), chrysalids (1-2), adults (2-3) <i>*in most cases, teachers collect just 2-3 eggs and watch the complete metamorphosis with these specimens</i>	2- 5 weeks *released either as the adults emerge, or maintained through bi-daily feeding for tagging/group release	Containment in rearing and holding cages, with appropriate space, air movement. Daily removal of frass. Daily replacement of fresh milkweed. Adults (bi-daily) feeding with appropriate sugar solution and/or fruit/nectar sources (or immediate release). Restricted handling– primarily observation.