Recent changes to be aware of:

- MLMP Datasheets change on occasion to help clarify procedures; make sure you download the most up-to-date versions at the start of each monitoring season.
- Activity 1 (Measuring Monarch Density) has different versions of the datasheet (season summary, weekly density summary, weekly density per plant summary). Encourage volunteers to participate in Activity 1 using the 1C datasheet (weekly density per plant), because this yields more information.
- Encourage volunteers to submit anecdotal Milkweed or Monarch Observations for monarch eggs, larvae and milkweed sightings at locations other than their registered site(s).
- Monarch SOS mobile app for Apple devices: MLMP is part of a collaborative monarch citizen science mobile app. The app by NatureDigger is currently available for free download as an educational app that can be used to aid in monarch and milkweed identification. During the 2016 monitoring season, the app will enter a second phase, where MLMP reporting functionality will be activated. A third phase (predicted by 2017 monitoring season) will allow data to be submitted to your MLMP profile directly from your mobile device.
- We are studying tachinid flies that emerge from butterflies or moths, and are encouraging volunteers to send us adult flies from monarchs or other species (frozen). This information is on the Activity 3 (Estimating Monarch Survival) datasheet. Important Note: We can only use adult flies for identification purposes, so encourage them not to kill fly larvae/pupae; adult flies can be frozen immediately upon emergence. Send flies to this address, and notify us at info@mlmp.org when shipped so that we know when to expect them:
  Monarch Larva Monitoring Project
  University of MN, Dept. of FWCB
  2003 Upper Buford Circle, 135 Skok Hall
  St. Paul, MN 55108

Tips for Training Activities

Pre-Workshop Preparation

1. Your training session(s) should be advertised on our website. Contact us with your session details as soon as you have them at info@mlmp.org, or submit your information electronically using the announcement form on our website. We can also advertise upcoming training sessions on our Facebook and Twitter pages, and through our newsletters. You can advertise MLMP trainings in your local newsletter or social media outlets, and send MLMP press releases to local newspapers.

2. Showing wild-caught specimens in trainings builds confidence when volunteers get to the field when they are trying to identify monarchs for the first time. We encourage display of all stages (eggs, all instar stages, pupae, and male and female adults) if possible. Because it is not an easy task to collect all stages from the wild for a training, we recommend you complement live specimens with MLMP’s laminated instar picture cards or other photos from the set of life cycle cards.
3. PowerPoint presentations to use during your training can be downloaded from our website resources page for your use; feel free to alter them to fit the needs of your training session but make sure to attribute any slides or photos used to the MLMP and/or the photographer associated with a photo.

4. Weather is an important consideration for the day of the training. Advise your participants ahead of time to be prepared for different weather situations. Have an alternate activity planned if weather prevents you from going outside. This could include a drawn milkweed patch illustrating scenarios they may find in the field and a walkthrough of protocols and how to complete datasheets given different scenarios. If weather is hot, try to split field activities into shorter time frames and try not to go out during the strongest heat of the day. Providing cold drinks on a hot day can be a life saver!

During the workshop
1. Talk about why MLMP is important. Emphasize weekly monitoring and data recording, and how the data are used to better understand monarch biology and conservation. Touch on the importance of citizen science data to academic researchers and point to some of the scientific papers that are generated from MLMP data (see mlmp.org).

2. It helps to give people an orientation to the MLMP website. Show them how you use the site, features that may be helpful to them, and show them your profile and how you go about entering data for various activities.

3. Remember that MLMP has online training videos. Please be sure to tell your participants of these videos. They are great resources to help clarify some questions, concerns, or to just reiterate what they learned in your training.

4. We encourage you to lay out different scenarios for new volunteers to think about as they delineate their site or encounter a situation they might not know exactly how to report. We have designed some of these scenarios, which can be found on the MLMP website.

5. Clipboards are a MUST for the outdoor portion of the training session. This will help prevent the loss of data sheets due to wind or clumsiness. These are provided in the MLMP monitoring kit (which we encourage participants to purchase), or you can use your own supply. MLMP monitoring kits include: a clipboard, pencil, life cycle cards, thermometer, rain gauge, Milkweed Monarchs and More field guide, a hand lens and field apron. Kits are available for purchase on the Monarch Lab online store. If you communicate with your workshop participants ahead of time to inquire if they’d like to order a kit, you can place a bulk order with us to have the materials available to hand out the day of the training.

6. Include conservation and habitat/gardening practices as well as information on the current state of the monarch population and ongoing conservation efforts. Participants crave this. To find out more about ongoing conservation efforts, visit www.monarchjointventure.org.

Each trainee should receive the following:
• MLMP training manual
• Extra data sheet copies, one to use during training, and one for reference or making copies
• a pencil
• evaluation materials
• a clipboard to use during the training
• a hand lens or magnifier to use during training
• Milkweed Monarchs and More field guide to use during training
• Life cycle card set to use during training
• appropriate handouts from the Monarch Joint Venture (Citizen Science, Rearing Responsibly, Milkweed, Gardening for Monarchs)
• Optional: an MLMP monitoring kit, either just for the training or available to purchase.
7. Participants often want to know where they can get milkweed from and what is native to the area. We suggest having a list of local and reliable nurseries as well as a native plant list to provide for them. Visiting www.plantmilkweed.org can help you find these resources.

After the workshop
1. Follow-up with your participants regularly. The information you provided is likely all new to them, and may be overwhelming. It will help if you can assist with things like helping set up a profile or entering data for the first time. If local, visit their potential monitoring site to build confidence in monitoring activities. Make yourself available for any questions or challenges they have in the early stages of participation in the project (first few weeks after workshop). Remind them that the online training videos are another resource available to them. If their challenges and concerns are beyond your abilities, feel free to connect them with MLMP staff.

Sample Agendas for 1.5, 1, and 0.5 day training sessions

1.5 DAY MLMP WORKSHOP SCHEDULE

Day 1 (half day)
30 min – Welcome, pre-assessment, introductions, icebreaker and overview
30 min – Big picture: North American monarchs, biology and conservation
15 min – Break
45 min – What is citizen science? An introduction to monarch monitoring programs
1 hr 15 min– Monarch life cycle observation stations – hands on observation and identification practice
15 min – Brief introduction to monarch monitoring, overview of second day activities

Day 2 (full day)
1 hr – MLMP: review identification, introduction of Monarch Density activity protocols, introduction to website
1 hr – Field activity: Monarch Density, data sheet 1C
15 min – Break
45 min – Taking it to your site:
• How to pick a good site, how to delineate your site
• How to involve others in monitoring
• Discussion of how monitoring responsibilities will be shared, creating an implementation plan
45 min – Lunch
30 min – Introduction to rearing monarchs responsibly and Activity 3 (Parasitism) protocols
15 min – Introduction to other optional MLMP activities
30 min – Gardening and creating habitat for monarchs, conservation action
1 hr – Practice: Participant’s choice – MLMP monitoring, other project demos (Project Monarch Health, Monarch Watch tagging), exploring MLMP or other monitoring websites. Questions.
30 min – Wrap up: evaluation, questions, expectations, and communication goals

1 DAY MLMP WORKSHOP SCHEDULE

30 min – Welcome, pre-assessment, introductions, icebreaker and overview
30 min – Big Picture! North American Monarchs, biology and conservation; Intro to MLMP
1 hr – Monarch life cycle observation stations – hands on observation and identification practice
1 hr – MLMP: review identification, introduction of Monarch Density activity protocols, introduction to website
45 min – Lunch
1 hr 30 min – Field activity: Monarch Density, data sheet 1C
1 hr - Gardening and creating habitat for monarchs, conservation action
30 min - Wrap up: evaluation, questions, expectations, and communication goals

½ DAY MLMP WORKSHOP SCHEDULE
30 min – Welcome, pre-assessment, introductions, ice breaker and overview
30 min - Big Picture! North American Monarchs, biology and conservation
30 min – Monarch life cycle observation stations – hands on observation and identification practice
30 min – MLMP: review identification, introduction of Monarch Density activity protocols, introduction to website
1 hr – Field activity: Monarch Density, data sheet 1C
15 min - break
30 min – Gardening and creating habitat for monarchs, conservation action
15 min – Brief overview of other MLMP activities and monarch monitoring projects
30 min - Wrap up: evaluation, questions, expectations, and communication goals