

Assessment of the third Waterbug Workshop

kindly sponsored by Melbourne Water.



In order to retain the quality of the teaching at the Waterbug Workshops, we have started to use a series of different methods throughout the course to quantify the improvement of participants. This allows us and them to identify gaps in the participants' knowledge quickly and concentrate on them before they become recurring problems.

This year, we used before and after tests (the 12 waterbug challenge discussed below), as well as insisting that people have the specimens they are working on formally checked by one of the demonstrators before the end of each day. This prevents the participants continuing mistakes and allows them to gain confidence in their own ID skills more swiftly.

Results from “The 12 waterbug challenge”

Taxonomic Identifications can be made at various levels - most people can easily perceive differences between orders and classes of organisms (the difference between spiders and insects for example), but family and genus identifications are more problematic and require the use of specialised texts and a microscope. One of the aims of this course was to train the participants to a high level of competency with family level identification. To test whether this was achieved, participants completed a brief test at the commencement and completion of the course in which they were asked to identify 12 freshwater invertebrates to the lowest taxonomic level possible for them. We assessed test results at Common Name, Order and Family levels of taxonomic resolution.

Everyone at the Third Waterbug Workshop improved their ID abilities, but the extent varied from person to person. If we compare their ability to name things using Common Names, their average scores (out of 12) went from 9.9 to 11.4 (significant using a paired t test). At the Order level, their scores went from 9.6 to 11.3 (also significant) and their ability to ID to Family level went from 3.2 before the workshop to 9.5 (just under 80%and also significant). So we were pretty happy with how everyone went. We used two randomised, different vials of bugs so people couldn't just learn the bugs by heart.

Each before and after comparison is calculated at the common name / higher taxonomic level (mainly order) / and lower taxonomic (mainly family) level. So there are three assessments. The ID was considered hierarchical, so if you can identify successfully to Family level it is assumed you are bright enough to look up the common name and what Order the Family belongs to. In a fit of leniency, common names that refer to a single Family were considered correct to family level ...but only for the before data. The test was completed in half an hour in a packed schedule...so some people didn't finish ...this is true for both before and after tests....and drops the average scores a bit overall.

Participant feedback

Feedback forms were filled out by most (26 of the 30) participants, the form asked them how they scored (from a total of five), the various components of the course. The results are in the table below. Feedback was overwhelmingly positive. Interestingly the lowest

1. What did you think of the quality of the workshop? Average: 4.9 (Min score = 4)
2. How would you score your progress in waterbug identification? Average: 4.4 (Min score = 3)
3. How would you score the facilities? Average: 4.6 (Min score = 4)
4. How would you score the presenters? Average: 4.9 (Min score = 4)
5. How would you score the specimens provided? Average: 4.8 (Min score = 4)
6. How would you score your overall enjoyment of the workshop? Average: 4.8 (Min score = 4)

scores were associated with their assessment of their own progress in waterbug identification. This contrasts with the results from the before and after tests which showed an obvious improvement in all participants, so maybe next year we need to work on building their self confidence up a bit. Many participants were kind enough to

leave more detailed but anonymous feedback, and these have also been included below.

“Thanks guys for an awesome workshop. Thoroughly enjoyed [it] and met some great ‘bug-minded’ people from across the country..”

“Great workshop – you guys put personality into what could be a very dull topic. Thanks for sharing your knowledge, skills and anecdotes.”

“My computer was crap. Amphipods are crap. Everything else was not crap.”

“Thoroughly enjoyable and productive way to learn. Would highly recommend.”

“Bloody fantastic. Don’t change a thing. Great presenters. Majority practical which is the best. I will be taking pointers for my future training of staff...”