Microsc. Microanal. 8 (Suppl. 2), 2002
DOI 10.1017.S1431927602104491



# "Ugly Bug" Contest

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The "Ugly Bug" contest that I ran this year was an attempt to introduce more quantitative measuring skills into a K-8 science curriculum. Bugs are probably second only to dinosaurs in interest to most students. In this contest I wanted to expand on some of the efforts that I had seen in a couple of state "Ugly Bug" contests[1][2] and include measuring exercises that the students could do with the bugs they collected. Subsequently they could compare their results with other school examples on the WEB.

The Educational Consultant for the State of New Hampshire agreed to mail out announcements of the contest to all elementary school principals. The announcement mailing included a description of contest prizes as well as a return postcard that a teacher in the school sent back announcing his or her classes interest in participating. I emailed the teachers the rules and regulations for the contest. and sent the every class a poster to inspire them in their quest.

After members of a class collected several bugs they had to as a group choose the one they wanted to enter in the contest. Then they had to classify it as best they could. This invariably involved the school librarian or teacher assisting them in WEB searches to identify the bug. My "Ugly Bug" web site also furnished them with links to various groups and university databases. Some schools invited in parents and friends who had bug collections. The dead entry was then sent to me along with the classes best shot at classification.

On receipt of the bug I photographed it with a varying assortment of reflecting light microscopes plus a digital camera shot that incorporated a metric ruler for calibration purposes[Figure 2]. Then the mounted bug was dried, sputter coated and examined in the scanning electron microscope. [Figure 3].

At the end of the contest each participating school received an 11" and 17" laminated poster of LM and SEM views of their bug[Figure 4]. They also received their "golden" bug back along with a couple of paper measuring exercises involving either a light microscope or SEM view of their entry [Figure 4]. They were directed to the Results WEB site[3] where they could see a LM view of their school's entry, plus all the other entries. On this same page was an ImageJ applet that came up and allowed students to view a variety of SEM bug images and answer the measurement questions [Fig.4].

The science supplier VWR had previous agreed to donate a good Stereo Microscope and two OK stereo microscopes as prizes. This took care of the first three prizes. All participating schools received laminated charts of various insects. I, with some assistance from colleagues, identified the submitted bugs and determined the winners. Emphais was placed on the apparent effort that the students had made in classifying their entry. It was also made clear at the end of the contest that their is no such thing as an ugly bug.

The New Hampshire Science Teachers is having a conference at Phillips Exeter the end of March, 2002. I will be presenting an imaging workshop at the conference and discussing the results of the contest with conference participants. On the basis of that feedback a decision will be made whether to have an "Ugly Bug" contest next year.

[1] Marilee Sellers NAU "Ugly Bug" Contest http://www.nau.edu/%7Eelectron/bug/99/99.html
[2] Oklahoma Microscopy Society "Ugly Bug" contest http://www.uglybug.org/
[3] New Hampshire "Ugly Bug" contest http://science.exeter.edu/jekstrom/BUGS/B.htm


Figure 1: Poster to participating elementary schools

Figure 2: Typical digital photograph “Elm Sawfly”

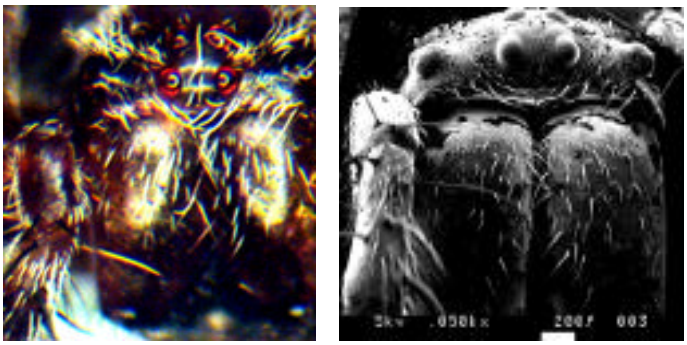

Figure 3: LM and calibrated SEM view “Barn Spider”

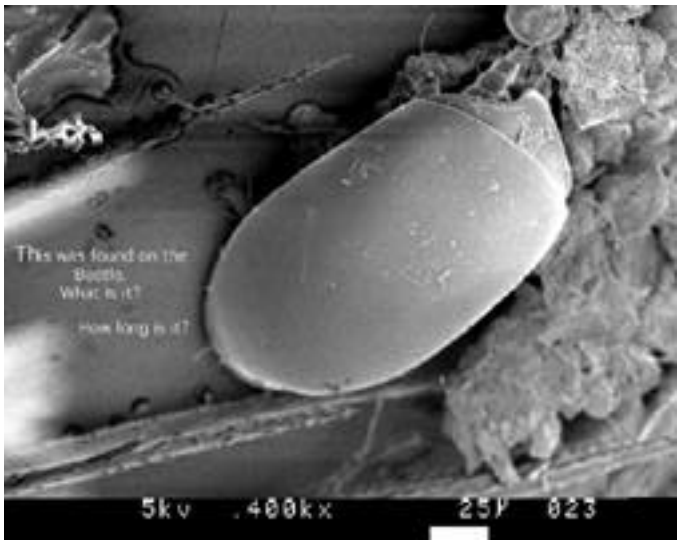


Figure 5: One of the ImageJ images that can be brought up for measurement on the WEB

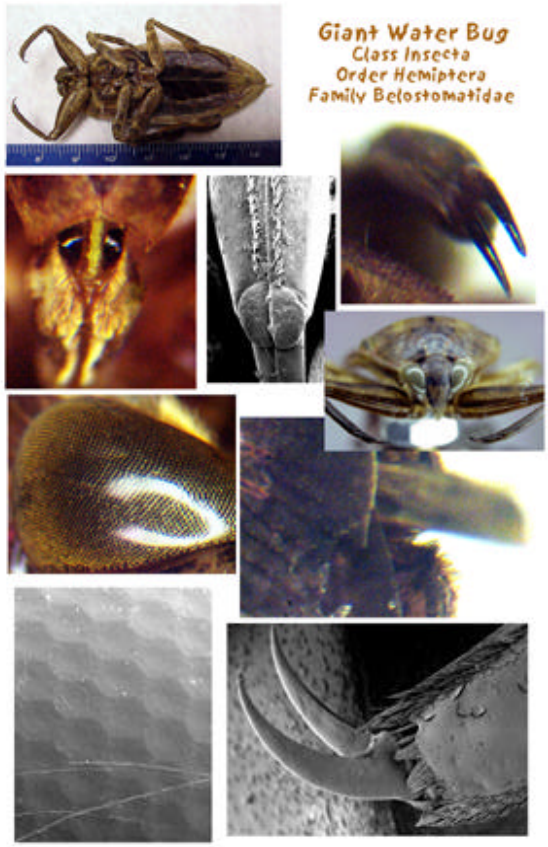


Figure 4: Poster sent to Stratham Schoiol

https://doi.org/10.1017/S1431927602104491 Published online by Cambridge University Press