RESULTS OF SURVEY OF GRADUATE STUDENTS BIOLOGY DEPARTMENT, DALHOUSIE UNIVERSITY: 2014

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SUMMARY AND GENERAL CONCLUSIONS

In December 2013 and January 2014 the Graduate Directorate of the Biology Department carried out a survey of the attitudes of graduate students to the graduate program and their supervision, a repeat of surveys carried out in 1989, 1992, 1996, 1999, 2004 and 2008. This survey, like that of 2008, was online using the *Opinio* software.

Fifty students of 79 registered for MSc or PhD degrees in Biology (65%) completed the survey, a rate similar to 2008, but much higher than earlier paper surveys.

Reflecting changes in the demography of the Biology graduate student population, compared to previous years, relatively more of the respondents were in the Agricultural Stream (12% versus 0-7% in previous years), supervised by members of the Faculty of Agriculture in Truro, and relatively fewer are supervised by adjunct professors (6% versus 11-26% in most previous surveys). In comparison to all surveys since 1996, there was a higher proportion of respondents whose undergraduate degree was at a university outside Canada where English was not the principal language of instruction (28%, versus 5-11% in these earlier surveys).

The students' perspectives on the programme as indicated by the results of this survey were generally similar to those from the more recent of the previous surveys. Overall, 51% of the students were pleased or very pleased with the graduate programme (versus 27-55% in previous surveys).

Graduate courses offered by the Biology Department in the students' area of interest were described as "too few" or "much too few" by 45% of the respondents. This is lower than the 59%,79% and 75% who felt this way in 2008, 2004 and 1999, respectively. Additional courses were requested in a variety of areas, but especially in ecology and quantitative/computing skills. Students were generally happy with the quality of the courses and modules that were offered.

Students continue to be positive about the Admission to Candidacy Examination with 82% of respondents describing them as "useful" or "very useful" (81-93% in previous surveys). There were comments from PhD students that the deadlines for the Preliminary Examination should be enforced more rigorously. Relatively fewer students than in previous years found their teaching assistant (TA) assignments very useful or useful (50% in 2014, versus 63-81% in previous surveys), and there were a number of comments about TA's being given insufficient responsibilities.

As in previous surveys, relatively few students (4%) reported poor or very poor relations with their supervisor. However, 50% reported less than an average of 3 hours contact with their supervisor per month (44% in 2008; 57% in 2004), and 32% found it hard to meet with their supervisor(s), with the supervisor almost never available or the student having to set up an appointment and wait days (11-18% in previous surveys).

27% of the respondents had problems with the payment of their monthly stipends which were either frequent, difficult to resolve, or both. Students estimated they needed a median of \$17,000 per year personal support plus fees. Although 71% of students reported adequate levels of personal support, there were a substantial number of complaints about the level and structure of graduate student funding.

The level of satisfaction with assistance provided by the Faculty of Graduate Studies has increased, with 42% of respondents describing them as helpful (versus 26% in 2008, and 35% in 2004).

Most respondents felt at least somewhat welcomed to the Department when they began their degree (86%), and that they are currently a part of the Department (70%). The BOGS retreat was particularly singled out as promoting these feelings of inclusion. Students working within the Faculty of Agriculture at Truro, and those starting in January or May, felt generally less welcomed and included. Several students noted a lack of interactions with faculty, and among faculty.

INTRODUCTION

This is a report on the results of a survey carried out by the Graduate Directorate between 17 December 2013 and 15 January 2014 of the graduate students in the Biology Department and their attitudes to the program and their supervision. In format and content it is largely a repeat of surveys carried out in 2008, 2004, 1999, 1996, 1992 and 1989. Like the 2008 survey (but unlike all prior surveys which used paper forms and answer sheets), this survey was entirely on-line (using the *Opinio* software provided by Dalhousie University). The preamble to the survey, which explains its rationale and the instructions for completing it, is given in the Appendix. In this report on the results of the 2014 survey we reproduce the basic questions, giving a numerical breakdown of responses (comparing them with the 1989, 1992, 1996, 1999, 2004 and 2008 results), and then summarize the written comments of the respondents. We end with a summary and our general conclusions drawn from the survey results.

Fifty students completed the survey (out of 79 students registered for MSc or PhD degrees, i.e. 65%)^a compared to 61/92 (66%) in 2008, 38/109 (35%) in 2004, 21/82 (26%) in 1999, 31/90 (34%) in 1996, 59/110 (54%) in 1992, and 65/110 (59%) in 1989. The 2014 and 2008 completion rates are similar and well above those of previous paper surveys.

GENERAL SUMMARY OF ANSWERS

This is a list of the questions, with the number of respondents to each answer and percent of those students who responded giving each answer. Not all students answered all questions. Percentage responses to the same question in the 2008, 2004, 1999, 1996, 1992 and 1989 surveys (in that order) are given in parentheses ("-", indicates the question was not in the earlier surveys).

General Information

1. Which stream are you in?

```
A. Population biology
C. Cell, molecular, organismal biology
E. Agricultural

28; 57% (65%,58%,63%,64%,43%,46%)
15; 31% (31%,42%,37%,35%,43%,42%)
6; 12% (3%,0%,0%,0%,7%,6%)
```

[Note: streams have been reorganized since 1992, and C was split into cell-molecular ("C"), and organismal ("D") until 2012]

2. What degree are you registered for?

```
A. PhD 31; 62% (69%,50%,37%,76%,49%,43%)
B. MSc 19; 38% (31%,50%,63%,24%,47%,57%)
```

3. How many years have you been enrolled in this degree program (including this year)?

```
A. 1

14; 28% (30%, 45%, 53%, 7%, 33%, 34%)

B. 2

14; 28% (13%, 21%, 32%, 38%, 33%, 22%)

C. 3

B. 16% (20%, 8%, 5%, 35%, 14%, 35%)

D. 4

5; 10% (18%, 8%, 5%, 10%, 9%, 5%)

E. >4

9; 18% (20%, 8%, 5%, 10%, 11%, 5%)
```

^a One student began the survey but did not complete it.

4. Is your principal supervisor:

```
    A. Full-time Biology Department Faculty
    B. Dalhousie Faculty with principal appointment in another department other than Fac. of Agriculture (e.g. Oceanography)
    C. Faculty of Agriculture (previously NSAC)
    D. Other:
    37; 74% (75%, 76%, 68%, 76%, 66%, 69%)
    48% (8%,11%,16%, 3%, 5%, 3%)
    68 (11%,14%, 0%,21%,26%,17%)
```

5. Was your undergraduate degree:

```
    A. At Dalhousie
    B. At another Canadian University
    C. At a University outside Canada where English was the principal language of instruction
    D. At a University outside Canada where English was the principal language of instruction
    T: 42% (57%,50%,58%,35%,41%,45%)
    T: 14% (15%,18%,10%,24%,16%,10%)
    D. At a University outside Canada where English was not the principal language of instruction
    14; 28% (8%,11%, 5%,10%,38%,30%)
```

Graduate Program

6. The amount of course (excluding thesis) work required for my degree is:

```
A. Much too much

B. Too much

C. About right

D. Too little

E. Much too little

0; 0% (0%, 0%, 0%, 0%, 0%, 0%, 2%)

6; 12% (3%,16%,11%,14%, 9%,25%)

38; 78% (84%,74%,89%,66%,81%,67%)

5; 10% (13%,11%, 0%,21%,10%, 6%)

0; 0% (0%, 0%, 0%, 0%, 0%, 0%)
```

7. The number of graduate courses offered by the Biology Department in my area of interest (excluding modules) is:

```
A. Too many
B. Satisfactory
C. Too few
D. Much too few

1; 2% (0%, 0%, 0%, 0%, 0%, 0%)
26; 53% (42%,21%,23%,45%,45%,36%)
16; 33% (37%,61%,41%,45%,38%,42%)
6; 12% (22%,18%,35%, 7%,17%,22%)
```

If "too few" or "much too few" what else would you like to see offered:

[Written answers summarized below]

[Note: prior to 1999, module classes were included in this question]

8. The number of modules offered by the Biology Department in my area of interest is:

```
A. Too many

B. Satisfactory

C. Too few

D. Much too few

0; 0% (2%, 0%, 0%, -, -, -)

21; 45% (57%, 50%, 47%, -, -, -)

19; 40% (30%, 32%, 32%, -, -, -)

7; 15% (11%, 18%, 21%, -, -, -)
```

[Note: question not asked before 1999]

9. The graduate courses (excluding modules) that I have taken have generally been:

```
A. Of very poor quality

B. Below what I expect of graduate courses

C. OK

D. Good and useful

E. Excellent

0; 0% (2%, 0%, 0%, 0%, 0%, 0%, 2%)

5; 10% (5%,13%,11%,14%,17%, 8%)

10; 20% (26%,42%,33%,52%,25%,59%)

30; 61% (57%,42%,39%,28%,53%,29%)

4; 8% (10%, 3%,17%, 7%, 5%, 3%)
```

Which were particularly good or bad?

[Written answers summarized below]

[Note: prior to 1999, module classes were included in this question]

10. The modules that I have taken have generally been:

```
A. Of very poor quality

B. Below what I expect of graduate courses

C. OK

D. Good and useful

E. Excellent

0; 0% (0%, 0%, -, -, -, -)
6; 13% (9%,14%,11%, -, -, -, -)
12; 27% (38%,39%,37%, -, -, -, -)
7; 16% (15%,11%,16%, -, -, -, -)
```

[Note: question not asked before 1999]

11. I have generally found the graduate courses that I have taken:

```
A. Very easy
B. Easy
C. What I would expect of graduate courses
D. Hard
E. Very hard

0; 0% (2%, 0%, 6%, 0%, 0%, 2%)
10; 21% (16%,16%,12%,41%,32%,10%)
34; 72% (77%,77%,77%,49%,61%,77%)
3; 6% (5%, 7%, 6%, 0%, 7%,10%)
0; 0% (0%, 0%, 0%, 0%, 0%, 0%, 0%, 2%)
```

12. As part of the graduate program's attempts to prepare me for academic life, my teaching assistant duties were:

```
A. Very useful

B. Useful

C. Ok

D. Little use

E. No use

8; 18% (22%,13%,28%,33%,32%,29%)

14; 32% (43%,44%,50%,48%,46%,40%)

15; 34% (22%,28%, 6%,15%,22%,14%)

7; 16% (9%,13%,17%, 4%, 0%,14%)

0; 0% (3%, 3%, 0%, 0%, 0%, 3%)
```

If you answered D. or E., explain why your teaching assistant duties were not useful:

[Written answers summarized below]

13. (Only those who have taken ATC exam) My ATC exam, and the preparation for it, were:

```
A. Very useful

B. Useful

C. Bearable

D. Rather a waste of time

E. A complete waste of time

11; 31% (46%,30%,36%,33%,60%,29%)

18; 51% (35%,57%,46%,59%,26%,64%)

5; 14% (13%, 9%, 9%, 4%, 9%, 7%)

1; 3% (7%, 4%, 9%, 0%, 1%, 0%)

0; 0% (0%, 0%, 0%, 0%, 4%, 1%, 0%)
```

If you answered D. or E., please explain why:

[Written answers summarized below]

14. (Only for PhD students who have taken their Preliminary exam). The preliminary examination in the Biology Department:

```
A. Works well

B. Is OK

C. Should be changed

D. Should definitely be changed

3; 38% (58%,75%,50%,43%, - ,25%)

3; 38% (33%,25%,50%,57%, - ,50%)

1; 13% (8%, 0%, 0%, 0%, - ,6%)

1; 13% (0%, 0%, 0%, 0%, - ,19%)
```

[not in 1992 survey]

If you think it should be changed, how?:

[Written answers summarized below]

15. Have you found the equipment and support facilities in the Department and in your supervisor's lab. to be adequate for your thesis research:

```
A. Adequate? 41; 85% (79%,79%,81%,89%,87%,67%)
B. Inadequate? 7; 15% (21%,21%,19%,11%,13%,33%)
```

If inadequate, what equipment or facilities should be available:

[Written answers summarized below]

16. (Only for students in their final year) The academic standards required of the dissertation for my degree appear to be:

```
A. Much too high

B. Too high

C. OK

D. Too low

E. Much too low

O; 0% (0%, 0%, 0%, 0%, 0%, 4%)

O; 0% (7%, 0%, 0%, 0%, 0%, 20%, 4%)

21;100%(90%,100%,100%,82%,80%,89%)

O; 0% (3%, 0%, 0%, 18%, 0%, 4%)

O; 0% (0%, 0%, 0%, 0%, 0%, 0%)
```

17. (Only those who have taken ATC exam) My supervisory committee have been:

```
A. Very useful

B. Useful

C. Very occasionally useful

D. Useless

7; 20% (23%,18%,11%,12%,29%,14%)

21; 60% (43%,41%,33%,27%,48%,48%)

6; 17% (32%,32%,56%,58%,21%,33%)

1; 3% (2%, 9%, 0%, 4%, 2%, 5%)
```

18.Other than my supervisory committee, and outside formal classes, academic interactions with other members of the Biology Department (Faculty, Students, etc.) have been:

```
A. Frequent and stimulating
B. Occasional
C. Rare

10; 20% (20%,21%,32%,17%,22%,26%)
25; 51% (52%,55%,32%,62%,53%,61%)
14; 29% (28%,24%,37%,21%,24%,13%)
```

19. I have received most assistance in my thesis research from:

```
A. My supervisor

B. Other members of my committee

C. Other Biology Dept. Faculty or Post-docs

D. Other students

E. External sources

33; 71% (67%,77%,79%,85%,69%,67%)

2; 4% (10%, 9%, 5%, 0%,12%,10%)

1; 2% (3%, 6%, 0%, 0%, 0%, 4%, 3%)

4; 9% (15%, 3%, 5%,12%,10%,15%)

6; 13% (5%, 6%,10%, 4%, 6%, 5%)
```

20. My general reaction to the graduate program in the Biology Department has been:

```
A. Extreme disappointment

B. Moderate disappointment

C. OK

D. Pleased

E. Very pleased

1; 2% (0%, 0%, 0%, 7%, 2%, 9%)

1; 2% (0%, 0%, 0%, 7%, 2%, 9%)

5; 10% (15%, 13%, 10%, 7%, 28%, 14%)

18; 37% (33%, 32%, 42%, 38%, 44%, 45%)

20; 41% (38%, 47%, 37%, 38%, 23%, 28%)

5; 10% (15%, 8%, 10%, 10%, 4%, 3%)
```

Any comments about graduate program in the Biology Department:

[Written answers summarized below]

<u>Supervisor</u> (Answer questions as related to your principal supervisor, whether external or within the Biology Department)

21. The total number of graduate students that my supervisor supervises (in this or other departments) is:

```
A. 1
B. 2
C. 3
D. 4
E. >4
B. 2
B. 2
B. 2
B. 2
B. 3
B. 4
B. 2
B. 2
B. 4
B. 2
B. 2
B. 2
B. 3
B. 4
B. 2
B. 4
B. 2
B. 6; 12% (8%,16%,22%, 7%,14%,14%)
B. 2
B. 20% (19%, 22%,17%,28%,16%,23%)
B. 4
B. 20% (19%, 5%,17%,24%,25%,19%)
B. 30% (17%,16%,33%, 7%,11%,20%)
B. 30% (37%,41%,11%,34%,34%,34%,23%)
```

22. In general my relations with my supervisor are:

```
A. Very good

B. Good

C. OK

D. Poor

E. Very poor

28; 56% (52%, 66%, 74%, 69%, 54%, 56%)

28; 56% (52%, 66%, 74%, 69%, 54%, 56%)

5; 30% (41%, 21%, 21%, 21%, 31%, 30%)

5; 10% (3%, 8%, 5%, 10%, 12%, 9%)

2; 4% (2%, 3%, 0%, 0%, 3%, 3%)

6; 0% (2%, 3%, 0%, 0%, 0%, 2%)
```

23. I have 1:1 contact with my supervisor (includes time spent by supervisor reading proposals, reports, thesis drafts, etc.) for an average (over the past year) of the following number of hours per month:

```
A. <0.25 (i.e. less than 15min per month)

B. 0.25-1

C. 1-3

D. 3-10

E. >10

2; 4% (5%, 8%, 5%, 0%, 5%, 6%)

8; 17% (17%,19%, 0%,21%,21%,16%)

14; 29% (22%,30%,16%,21%,32%,28%)

17; 35% (42%,30%,68%,35%,26%,38%)

7; 15% (15%,14%,11%,24%,16%,13%)
```

```
24. I would prefer:
       A. Much more contact
                                                        5; 10% ( 5%, 8%, 0%, 3%, 9%, 0%)
                                                        15; 31% (25%, 30%, 22%, 14%, 24%, 36%)
       B. More contact
       C. As is
                                                        28; 57% (68%, 62%, 72%, 83%, 66%, 62%)
       D. Less contact
                                                        1; 2% ( 2%, 0%, 6%, 0%, 2%, 2%)
                                                         0; 0% ( 0%, 0%, 0%, 0%, 0%, 0%)
       E. Much less contact
25. I would characterize my supervisor's attitude to my graduate supervision as:
       A. Very considerable guidance
                                                         7; 14% (13%,14%,11%, 7%,10%, 8%)
       B. Initial guidance, but then allowed/made me
               do it myself
                                                        13; 26% (26%, 25%, 37%, 26%, 35%, 29%)
       C. Guidance freely provided when I ask for it 26; 52% (54%,50%,53%,67%,50%,54%)
       D. Guidance reluctantly provided when
              I ask for it
                                                         3; 6% ( 5%, 3%, 0%, 0%, 5%, 3%)
                                                        1; 2% (2%, 8%, 0%, 0%, 0%, 6%)
       E. Virtually no guidance ("sink-or-swim")
26. Ideally, I would like:
       A. Much more guidance
                                                        3; 6% ( 3%, 5%, 0%, 0%, 3%, 0%)
       B. More guidance
                                                       14; 28% (18%, 35%, 6%, 24%, 31%, 29%)
                                                        32; 64% (75%, 60%, 94%, 72%, 66%, 71%)
       C. OK
       D. Less guidance
                                                        1; 2% ( 3%, 0%, 0%, 0%, 0%, 0%)
       E. Much less guidance
                                                        0; 0% ( 0%, 0%, 0%, 3%, 0%, 0%)
27. When I need to see my supervisor:
       A. He/she is almost never available
                                                        2; 4% ( 0%, 0%, 0%, 0%, 3%, 2%)
       B. I have to set up an appointment
              and may have to wait days
                                                       14; 28% (16%, 21%, 16%, 11%, 10%, 16%)
       C. He/she is usually available that day
                                                       25; 50% (64%, 66%, 63%, 57%, 68%, 67%)
       D. He/she is always available that day
                                                       9; 18% (20%, 13%, 21%, 29%, 17%, 16%)
28. I wish my supervisor had:
       A. More graduate students
                                                       15; 30% (13%, 23%, 32%, 7%, 16%, 17%)
       B. OK as is
                                                       34; 68% (80%, 57%, 68%, 90%, 72%, 75%)
       C. Fewer graduate students
                                                        1; 2% ( 7%,20%, 0%, 3%,12%, 9%)
29. I would recommend incoming graduate students:
       A. Not to work with my supervisor
                                                        1; 2% (5%,11%, 0%, 0%, 3%, 3%)
       B. To be aware that working with him/her
              is not always easy
                                                         7; 15% (11%, 11%, 11%, 11%, 14%, 10%)
       C. That he/she is a good supervisor if you want a lot
                                                         2; 4% ( 3%, 0%, 11%, 4%, 5%, 5%)
              of guidance
       D. That he/she is a good supervisor if you do not want
             much guidance
                                                       18; 38% (31%, 33%, 22%, 29%, 17%, 28%)
       E. A good supervisor for almost anyone
                                                       20; 42% (49%, 44%, 56%, 57%, 60%, 53%)
```

Comments about supervisor or supervisory system:

[Answers summarized below]

Financial support

30. Do you find that the funding available for your research is:

A. Adequate 37; 77% (65%,76%,69%,92%,70%, -)
B. Inadequate 11; 23% (35%,24%,31%, 8%,30%, -)

[Note: question not asked in 1989 survey]

```
31. Is your current level of personal support:
      A. Adequate
                                                    35; 71% (59%, 78%, 47%, 77%, 63%, -)
      B. Inadequate
                                                    14; 29% (41%, 22%, 53%, 23%, 37%, -)
[Note: question not asked in 1989 survey]
32. What is your experience for payment of your monthly stipend:
      A. No problems - stipend was always paid on time and was
             for the correct amount
                                                    23; 49% (47%, 42%, - , - , - )
      B. Few problems (fewer than 1/yr) and
                                                    12; 26% (33%, 33%, - , - , - , - )
             easily resolved
      C. Frequent problems (greater than 1/yr)
            but easily resolved
                                                     4; 9% (16%, 3%, - , - , - )
      D. Few problems (fewer than 1/yr) but the problem
             took one or more months to resolve 4; 9% (4%,11%, - , - , - )
      E. Frequent problems and difficult to resolve 4; 9% (0%,11%, - , - , - )
[Question not asked before 2004]
For answers B-E please describe the payroll problems.
[Answers summarized below]
33. Information on travel support:
      A. I was informed of the FGS travel support programme and found the forms
              easy to access
                                                    29; 62% (63%,52%, - , - , - , - )
      B. This is the first I've heard of it
                                                    18; 38% (38%, 49%, - , - , - )
[Question not asked before 2004]
34. Why did you apply to do your graduate studies at Dalhousie?
      A. I did my undergraduate degree here and
                                                     5; 10% ( 9%, 9%, - , - , - , - )
             liked it enough to stay
      B. Supervisor's reputation
                                                    25; 51% (44%, 41%, - , - , - )
      C. Heard from other graduates
                                                    1; 2% (4%, 6%, -, -, -, -)
      D. Saw a notice or advertisement for graduate positions
                                                    5; 10% ( 7%, 6%, - , - , - , - )
              at Dalhousie
      E. Other (please describe)
                                                    13; 27% (37%, 38%, - , - , - )
[Answers summarized below]
[Question not asked before 2004]
35. The Faculty of Graduate Studies has been helpful during my time here
                                                     9; 18% (15%, 6%, - , - , - )
      A. Strongly agree
                                                    12; 24% (11%, 29%, - , - , - , - )
      B. Weakly agree
      C. No opinion
                                                    20; 41% (54%, 40%, - , - , - )
      D. Weakly disagree
                                                     6; 12% (13%, 14%, - , - , - )
      E. Strongly disagree
                                                     2; 4% ( 7%,11%, - , - , - )
[Ouestion not asked before 2004]
36. In what month of the year did you begin your program?
      A. September
                                                    35; 70% (53%,63%, - , - , - , - )
      B. January
                                                     8; 16% (28%,16%, - , - , - )
                                                     7; 14% (18%,21%, - , - , - )
      C. May
[Question not asked before 2004]
37. When you first began your degree did you feel welcomed to the Biology Department?
      A. Yes, I felt very welcomed to the Dept. 21; 42% (34%, 46%, - , - , - )
                                                    22; 44% (38%,31%, - , - , - )
      B. I felt somewhat welcomed to the Dept.
      D. I felt like I was ignored entering the Dept. 2; 4% (8%, 0%, - , - , - )
```

If you answered A or B to this question, please describe what made you feel most welcomed to the Department; if

you answered C or D to this question, please describe what could be done to make new students feel more welcomed to the Department.

[Answers summarized below]

[Question not asked before 2004]

38. Now that you are a graduate student in the Department, do you feel like you are a part of the Department?

```
A. Yes, I feel very much like I belong in the

Department

Department

Department

Department

Department

19; 39% (34%,34%, - , - , - , - )

C. Not really. I do my own thing and don't really feel

like a part of the Department

14; 29% (31%,28%, - , - , - , - )

D. Not at all. I don't feel like I belong in the Department at all

and I can't wait to leave

1; 2% (0%, 3%, - , - , - , - )
```

If you answered A or B to this question, please describe what makes you feel like you belong in the Department; if you answered C or D to this question, please describe what would make you feel like a part of the Department. [Answers summarized below]

[Question not asked before 2004]

39. What level of personal support would you consider adequate for a graduate student here in Halifax, assuming you have to pay regular fees of about \$7,000 per year:

\$	per year	
\$10,000-12,999	4;	10%
\$13,000-15,999	8;	21%
\$16,000-18,999	10;	26%
\$19,000-21,999	12;	31%
>\$22,000	5;	13%
Median: \$17,000		

[Comparisons with answers from previous years are not presented because of changes in the format of the question and inflation, etc.]

40. Any other comments? [Summarized below]

WRITTEN COMMENTS

The comments were edited by Hal Whitehead to: summarize repeated comments; clarify; improve grammar and spelling; and omit very detailed information.

Q. 7. Respondents commented that the following sub-disciplinary courses would be useful additions (number of respondents mentioning type of class in brackets):

Genomics (2); Bioinformatics (1); R programming (2); PERL programming (1); Spatial statistics (1); Advanced ecology (macroecology, evolutionary, theoretical, population, community, conservation) (5); Soils (1); Agronomy (1); Entomology (1); Biotech (1); Human genetics (1); Advanced cellular (1); Advanced applied statistics/ quantitative biology (3); GIS (1); Plant physiology (1); Advanced marine biology (1)

General comments:

- "More variety. Many of the grad courses are in stats, cell biology, or ecology, none of which applied to my project or struck my interest."
- "More industry (Biotech) related courses."
- "The university has enough [classes], but they seem to be offered more in certain semesters, while there is a lack of interesting courses in others. A more even distribution of these courses would be nice."
- "There aren't many courses for cell/molecular biology people there should probably be more guidance for these students on how to choose good courses in the departments of Biochemistry & Molecular Biology and Microbiology & Immunology."

Q. 9. There were a few comments on the quality of specific classes:

- "Analysis of Biological Data": good (4); "challenging and very applicable to thesis work"
- "Communications (BIOL5700)": OK (2), good (3), waste of time (1)
- "Communications (AGRI5700)": good (1)
- "Experimental Design": "do[es] not include many timely methods"
- "Molecular Ecology": bad (1)
- "Molecular Techniques": good (1)
- "Time Series": good (1)
- "Data Analysis (Stats Department)": good (1)

General comments:

"I expected graduate courses would be more complex/deeper than undergraduate ones but actually they are the same courses offered for both, grad and undergrad students with just extra duties for grads. I wish graduate courses would be more integrative of different disciplines, more focused on reinforcing knowledge and develop professional skills."

Q. 11. There were two comments on particularly hard or easy classes:

- "In general, I found that all grad courses that I taken (BIOL 5700, BIOL 5705, BIOL 5062) were easy, but required lots of time since all of them asked for a major paper which required a lot of time i.e., literature review, particularly when the topic is not related to your thesis project."
- "Time series analysis in the STATS/MATH Department was extremely useful, but hard work (which is what I would expect)."

[&]quot;Courses in Biochemistry & Molecular Biology were excellent."

Q. 12. There were several comments for the question on T.A. duties:

- "It was expected of me to open a class using the slides prepared by the instructor, which seemed pointless to me.

 The remainder of the duties were just to mark assignments."
- "To make sure I stayed within the 65 h for my course, I was advised to minimize the amount of feedback provided to students. I was also told, I was 'lucky' to be able to count prep time in my hours. While there seemed to be a focus on me actually doing some teaching, when it came to actually doing things, the instructor did everything. The instructor often communicated with the students without letting me know what was happening or what had changed. Overall, it was a very frustrating experience."
- "It was little use because the instructor assigned to the course did almost all the presentation in the class by herself. I believe the graduate students [are] suppose[d] to be given [opportunities] for class presentation."
- "Not enough responsibility. Graduate students should be capable of leading a course, not being the assistant to a technician."
- "Intro Ecology has graduate student TA marking papers with very little teaching experience. As a result student evaluations of TA can be low which is demoralizing to the TA."
- "There are very few courses in which you are anything more than a marker. Contact time with the students and our ability to teach students is much lower than I would like."

Q. 13. There were two comments about the Admission to Candidacy Exam:

- "The first ATC I did was a complete mess, because the supervisory committee members given to me by my first supervisor were not in the area of the thesis. The second ATC was very useful when I chose the supervisory committee members in the area of the thesis."
- "Proposals/projects change too often to waste a significant amount of time preparing to defend one. My project for instance, has completely changed since my ATC and this is also true for my only lab mate. A comprehensive exam would be more useful in the long term."

Q. 14. There were a few comments on this question about the Preliminary Examination

- "The timing of it is bad as it comes when you would like to be working/focusing on your thesis. Perhaps a bit earlier in the program for it? The exercise itself is very useful though."
- "Students really should be made to do preliminary early in their thesis, it just seems to be a disaster when it gets "in the way" of defending in year 5."

Q. 15. Equipment needs:

- "Desks and chairs are creating issues for my ability to work effectively I am seeking medical help for wrist pain from typing."
- "We need quality computers."
- "No software to analyse data and no stationary to print useful materials."
- "The microscopy suite at Dalhousie is unbelievably out of date."
- "My issues were not re. equipment/facilities, since my thesis is computer-based and I did received funding to purchase adequate equipment (i.e., upgrade computer) and was assigned a desk. However, I felt that the Department and my supervisors [failed] to provide adequate "technical support" such as statistical advice and/or help in programming complicated biological modelling."

Q. 20. General reaction to Biology Graduate Program:

"The main issue is the pittance of a stipend that international graduate students are expected to live on. This disrupts their full-time commitment to studies as they are required to work to supplement their income.

- Beneficial is the Lett fund, which is of great use and a rare opportunity among graduate programs." "I've received little guidance from my supervisor, and, in general, the feeling in the department is very apathetic. While the weekly FISH seminars are great, I still feel like, as a graduate student, I am not part of the department."
- "The lack of cohesion and support in the department has been very disappointing. I feel so alone. The Department needs to make a much higher effort to encourage mingling and collaboration within the Department, between students and between students and other faculty members."
- "I find the requirements for Masters and PhD theses are very reasonable and doable. However, I don't think though that they are time-appropriate, and I find it unsatisfactory that the funding available to students does not reflect this."
- "When comparing the requirements with other universities, specially European ones, Dal's are much higher. Many programs have only one or two of the requirements. I do agree with the requirements at Dal, because I feel I'm better prepared for when I graduate, but it makes the program usually take longer than the expected 4 years."
- "Because I am located at the Agricultural campus my experience is much different than what I think I would be getting at the Biology department. Seminars are rare, there are no discussion groups, no coffee meetings, or other events to interact with the other researchers in the departments. I feel that graduate students are the reason research gets done at all on university campuses, but the general feeling at the Agricultural campus is that graduate students are undervalued and not treated like mature members of the academic community. It is hard to find out the correct person to contact with problems; department secretaries, the graduate department on campus, or someone in Halifax. It seems we are often given the run around on administrative issues, again making us feel undervalued."

"The salary is a disgrace."

- "In general, I feel that the program needs a serious revamping. Many grad students are not thinking [of] pursuing an academic carrier but rather a professional carrier. There are many tools that are commonly used in a day-to-day way by field and/or quantitative biologists that are not taught at Dalhousie (or at least not in an applied-biological way: too theoretical). Grad mandatory courses have, for my part, been more of a burden than helping me advance in my thesis or my professional development. I also feel that despite FISH talks and seminars, there are not many opportunities to hear and learn about each others' work, although I'm not quite sure how I would fix this. I think that it would be very useful to have per Biology Stream one assigned professional statistician/computer scientist who could provide additional technical support to grad. students (at least it would of been very useful for me :-), but this is probably not very realistic. Also, I really feel that the Department and supervisors should really help students to ensure that they complete their requirements in a timely fashion i.e., 2 years Master, 3-4 year a PhD. It is unacceptable to drag grad programs longer. In my experience, there are a lot of governmental and university money that is lost in this process i.e., lot of time wasted! Many countries have set relatively short maximum time for Masters (which do not even exist in some countries) and PhDs. In other words, students at a younger age can start working and acquire real-work experience, which makes them much more competitive in the work place than Dalhousie grad students. Moreover, I strongly believe that workshops should be offered to supervisors on how to better supervise. This appears to be one of the hardest task (at least for my supervisor) and I feel that my "moderately disappointing" experience in the Department has been largely because of poor supervision and lack of clear guidance."
- "I think Biology at Dalhousie is a great program. I studied and worked hard, gained a great amount of knowledge and after finishing a MSc, I really feel like it is a major accomplishment. The only thing that could really be improved is the culture: Faculty do not interact much with students. It is a rather hierarchical system, in which the student is not seen as an equal colleague. I found the overall culture extremely different from universities in Europe, where there is constant discussion, and where Profs are challenged by their students and vice versa. The overall teaching style (there are exceptions) is that the prof preaches and the students absorb. In my opinion, one of the key skills to pick up in university is critical thinking, which is not stimulated by the current culture at Dalhousie."

- "My personal view is that students registered at the Department of Biology but doing research at the Faculty of Agriculture have limited access to courses especially in the area of plant physiology. I think the Department will have to intervene to make it easier for us to get options in our courses."
- "The biggest disappointment is how little interaction there is between many faculty and between faculty and students (there are a few members that do try, but they are in the minority). To make a strong Department is takes the majority of faculty to take time and interact with students, this also fosters student-student interactions. Without this support from the top it is up to individual students to build a strong department and with our high turnover rate it isn't sustainable."
- "The interactions with faculty are abysmal. No one shows up to seminars, and I get the feeling that even the faculty don't interact with each other. When is this department going to get a lunch room for faculty/grad students that can facilitate this?"

Q. 29. Comments on supervisors and the supervisory system:

- "Always has time to discuss anything. Always willing to use funds to explore research avenues. Allows me the freedom to proceed as I deem fit. Slow in turning around papers/chapters."
- "My supervisor has a lot of external commitments and can be difficult to make time to see. I've found this frustrating as I'm still trying to figure out my project details and would appreciate more time to discuss how to overcome several obstacles. I'd also appreciate more assistance when applying for grants (rarely are whole proposals reviewed). Until recently, I felt my supervisor had little interest in my project, given the little guidance I was receiving. But an offhand remark indicated that they thought the project was exciting. I like working independently, but I feel this is a bit too much."
- "He/She does not value his/her students, that is not motivating."
- "I usually just need to set-up a meeting and can have an appointment during the week. However these contacts are not providing me with the support that I need i.e., the problem is the quality of these meetings. Both supervisors advised me to take a certain approach (cutting-edge statistical modelling) that neither of them could help me with none of them [has] slight understanding of these models nor capacity/time to dedicate at learning them, such that I [had] virtually had no guidance and no one to discuss these models with at Dalhousie. I strongly believe that this is flat wrong and poor supervision. I had to seek advice outside of Canada. In other words, I lost enormous amount of time and without external helpers—who were not even collaborators of my supervisors—, I would have quit my PhD."
- "I am very happy with my supervisor, who has allowed me to work independently, but who has also offered excellent guidance when I needed it."
- "He is very good and even go the extra mile to find out how I am handling the program vis-a-vis my personal life (family, health, finances and social life). He is willing to help in all things within his ability."
- "My supervisor seems to generally assume that his students know what they are doing, even when their abilities are below par. For some students, the independence is good, but many need to ask for guidance and don't realize it. (So they never ask, and they get behind on their projects.)"

O. 32. There were problems with stipend payments:

- "It's simply not enough for any independent adult to live off. For example it is less than half of that given at UK universities."
- "To date, no problems, but I'm still trying to figure out if I'm being paid at the right amount. it would be nice to get a pay stub."
- "A mistake in switching me to continuing student fees."
- "My first pay of the semester is usually always wrong and takes a month or two to fix."
- "Discrepancies between actual fees and fees paid by the Department of Biology."
- "Since I changed my supervisor, I have been having problem to feed myself and my family."
- "not paid....not paid correct amount....no pay 'schedule'"

"Was not paid for TAing, and my first month scholarship was delayed."

"You never know what you get. Everybody gets different amounts and every term you get a different amount. That drives me crazy! It is not so hard to create a financial plan at least for each year!"

Q. 34. Other reasons for doing graduate work at Dalhousie included:

Interested in my supervisor's research: 3

Living in Halifax: 3 Good reputation: 1 Personal reasons: 1

"Found through contact with an researcher external to Dal"

"Visited for summer's project in 2011 in the same lab and liked it so much I came back for my PhD."

"Applied over internet, seeing Dal's reputation for biological studies."

"My supervisor asked me if I wanted to."

"Did my MSc thesis with my supervisor."

"Found the PhD posting on Indeed.com."

"Wanted to work on a specific organism and supervisor had similar interest."

"Got a scholarship here"

"When I read about the research being conducted at Dal I was intrigued."

Q. 37. Why graduate students felt welcomed to the Biology Department:

BOGS retreat: 6

BOGS activities (inc. FISH seminars): 2

Supervisor: 2

Communications class: 1 Other graduate students: 2

People very friendly/welcoming: 2

Graduate Coordinator: 2

Difficulties with feeling welcomed:

Difficult for January/May starts: 3 Difficult for Truro students: 2

"The orientation was useless and did not let new students know about campus services, graduate students rights or expectations."

"It took quite a while to be added to the graduate student mailing list, although I sent numerous emails to the graduate secretary. This made me feel very alienated for the first few months of my degree."

Q. 38. Why graduate students feel as though they belong, or do not belong, to the Department:

"I believe if I am a student here, then this department should be like my home and people in it like my family, and we should contribute with each other."

"My interactions with other students and with faculty"

"Coffee, Friday beer, the communications class."

"Through my own initiation, I have taken on developing and instructing a new course in the department. This requires more interaction with more members of the department in all different areas, which makes me feel like I contribute and am more integrated. This is [not] the only reason I feel accepted but it does make a nice excuse to interact with others."

"BOGS has a lot of activities where you get to meet everyone."

- "Know and spend time with other grad students."
- "I try to participate in academic and social activities at the Biology Department."
- "I feel as though people within the department know who I am. BUT, once I give my FISH talk, they will finally really know what I am working on."
- "I enjoy Thursday seminars and FISH talks as they provide opportunities to catch up with other members of the Biology Department."
- "Activities with fellow graduate students, but there remains a disconnect between students and faculty that is disappointing."
- "Other grad students. Interactions with faculty besides my supervisor are nonexistant."
- "I don't feel like I'm part of the Department. I assume that if I would participate more in the organized activities, I would feel a bit more part of the Department. However, I think that this is partly due to how my lab is run. There is no sense of family; our lab is separated with people working in different offices and all students are working on different subjects, such that we do not feel that we can help each other much."

Q. 40. General comments about the graduate programme, etc.

- "I suggest a critical assessment of the supervisory committee members given or chosen by a graduate student. The area of specialisation of students and his or her supervisory committee members must be the same. I also suggest that area of expertise of supervisors should match area of the student's specialisation."
- "In general, I am satisfied with my experience at the Biology Department. I wish there were more diverse, updated, and hands-on courses developed for graduate students."
- "I have found the registrar, student accounts and graduate studies to be very frustrating departments to deal with. It has been impossible to anticipate how much money I will receive each month, and filing paperwork is a nightmare. For example while applying to a scholarship recently it came to my attention that my transcript was wrong due to an error at graduate studies. Resolving this error was very difficult and almost threatened my eligibility (re. deadlines) for the scholarship."
- "Thank you for organizing the survey."

Financial issues

- "The stipend needs to be resolved!"
- "Few graduate students have enough income to cover their living expenses with the currently accepted level of support. This is unacceptable. The TA pay rate at Dalhousie is pathetic compared to other institutions. The students at Dal are struggling financially which inevitably results in lower quality research and lower enthusiasm about academia in general."
- "The severely reduced financial support that a student receives in his fourth year at DAL is shocking and outrageous when compared to other institutions. PhD students should expect to have FOUR years of ADEQUATE support...not dwindling."
- "We all know that support AFTER four years is not guaranteed but I was shocked to find out that a fourth year student receives only \$14,000 and out of that needs to pay continuation fees. Nearly all universities support their PhD students around \$22K for their 4 year term. If I had of know this about DAL I wouldn't have come to this university so it's a good thing that the university hides this information. I am a student who came here on a NSERC scholarship, and when that money ran out after 3 years I was shocked at the financial support being offered. DAL is hindering its graduate students and the word will spread."
- "The pay here is much lower than I have experienced in Europe and Australia and I have to double check every month if I received the amount I was supposed to. It is a real bother."
- "The minimum monthly stipend for graduate students should be increased accordingly with the current cost of living in Halifax, \$1200 for MSc and \$1500 for PhD students. Graduate students without economic burdens will be happier, healthier, and more productive."
- "The stipend is always not enough because I have to pay international differential fees on top of the high amount of tuition fees. Monthly, I get an average of C\$1,100 of stipend. After payment of rent and utility bills it

is only left with less than C\$300 which is never enough. As a full-time student it is difficult to take up any extra jobs after long hours in the lab. This then always keeps me worried about finances and takes my mind off my studies and research. If something can be done about it will be well appreciated."

APPENDIX—Preamble to Survey

This survey was carried out by the Biology Graduate Directorate in 1989, 1992, 1996, 1999, 2004, and 2008. It was felt important to find out from the graduate students how they view their supervision and the graduate program in general, and to try and pinpoint current or potential problems (Are supervisors with many graduate students doing a poor job? Are some externally supervised students receiving little help?). The purpose of the survey was to try and find out students' views on your experience here. We think it is time to repeat the survey, to see how attitudes may have changed.

The survey is anonymous. The original written comments will only be seen by Hal Whitehead, the graduate coordinator, and he will keep any information which might identify individual respondents confidential. He will also analyze the statistical information. We will analyze the survey in the usual ways, giving the distribution of answers to the questions by graduate students, examining some correlations (e.g. number of graduate students supervised by satisfaction of students with supervisor), and comparing results with those from previous years. Great care will be taken to ensure that no answer can be attributed to a particular individual student by anyone, but please do not answer any questions you do not feel comfortable with. We will produce a report on the results of the survey which will be placed on the Biology Department web site (for results of previous surveys see: http://biology.dal.ca/Graduate/gradSurvey08.pdf), and, maybe, discussed at COW.

Do not answer any questions that you feel may identify you, that do not apply to you, or that you do not wish to answer, for any reason.