

2929 Orange Avenue
La Crescenta, California
January 20, 1960

Martin W. Johnson, Ph.D.
Scripps Institution of Oceanography
La Jolla, California

Dear Sir:

I am a ninth grader at Anderson W. Clark Junior High School in La Crescenta (which is above Glendale), doing my vocations unit in English. We are supposed to choose a vocation that we think we will go into and find out about it.

I have chosen marine biology as my vocation. I planned on going into it before I ever knew about the vocations unit. Last spring I won second prize, Junior Biological Division, at the San Fernando Valley Science Fair with my project on mollusks of this area.

The reason that I am writing you is that we have to obtain an interview with someone in our chosen field. I was wondering if you would be able to take time off from your busy schedule to answer some questions I have prepared. These questions are general and designed to help someone who does not know much or anything about marine biology to find out something about the aspects of it. The questions are listed below.

1. What are the basic background requirements?
2. What courses do you think are of most value in high school?
3. What courses do you think are of most value to take besides those that are required in college?
4. What type of person should one be if he plans to enter this field?
5. What do you consider some of the personal requirements?
6. Is marine biology a growing field in which more job opportunities are opening.
7. What places employ a person trained in marine biology?

8. What places do you know in industry that offer jobs?
9. What are the advantages and disadvantages of working for industry?
10. What are the advantages and disadvantages of working for the state or federal government?
11. What are the advantages and disadvantages of getting a teaching position?
12. Are job opportunities better outside of California?
13. What sort of salary can one get?
14. What are the working conditions?
15. What are the chances for advancement?
16. What are the retirement plans?
17. What are the fringe benefits?
18. Do you think marine biology is interesting?
19. Does it involve much routine?
20. Is it difficult work?
21. Do you have a regular work week, or are the hours you work irregular?
22. What are the advantages and disadvantages of work in marine biology?
23. Are the people in this field easy to get along with?
24. Do you feel that work of this sort is gratifying?

Thank you very much.

Respectfully yours,

Camilla Ingram

Camilla Ingram

22 January 1960

Miss Camilla Ingram
2929 Orange Ave.
La Crescenta, California

Dear Miss Ingram:

Although my answers to your questions regarding a career in Marine Biology are partially directed toward prerequisites for advanced study after having received the Bachelor of Science degree in some field of biology from a standard college, they may also be helpful for someone, as a guide, whose formal education ends with a Bachelor's degree.

1. Basic background in sciences should include a baccalaureate major or equivalent in one of the biological sciences. For example, zoology, botany, microbiology, et cetera. The appropriate combination of other sciences will depend somewhat on the biological science majored in, but in general, a year of English; mathematics, preferably through calculus; chemistry, including some organic; and some physics (in high school or college) are recommended.
2. In High School you should get plenty of English, mathematics and some fundamental science (it doesn't matter much which), a study of foreign language, especially German or French.
3. It would be useful to study some art of the kind that will help you observe, appreciate, interpret and integrate the truths and beauties in nature (not too much of the "blob, splahs and drip" type). Also useful are studies in the humanities.
4. and 5. Needed is a well-balanced person with an interest in living things, and how they keep house and manage to compete in nature. Although there are various types of work to be performed in marine biology, that which calls for field work requires a reasonably vigorous physique, certainly someone who is active, alert, and loves the outdoors.
6. Yes, I think it is, especially in oceanography and fisheries.
7. Marine biologists are employed at marine biological laboratories or oceanographic laboratories, both of which are usually operated by universities or colleges. Many are employed in fisheries laboratories, usually sponsored by the State or Federal government. The Navy also uses some marine biologists. Added to these are, of course, the marine biologists who teach in the various universities and colleges.
8. There are also some opportunities in industry, but they are relatively fewer. In the fishing industry, some canneries may use bacteriologists trained in marine microbiology. The industry concerned with harvesting and processing seaweed have also supported marine research.

9 and 10. Perhaps there is no great difference. They both have some routine aspects, and both expect good, loyal service and diligent application in the position for which one is hired.

11. In a teaching position there is great responsibility and a good opportunity for individual initiative. Some aspects of the work do become quite routine, but doubtless less so than in most industry.

12. I don't think so.

13. The range of salary depends upon preparation, ability and accomplishment just as in other professional positions.

14. The working conditions are in general good, but sometimes pretty rugged.

15. Good, if you are good.

16. and 17. These may vary, but in general, most institutions do have a working system.

18. Yes.

19. Yes, at times it does.

20. Yes, Marine Biology is challengingly difficult.

21. Yes, in general, but much irregular time may be involved, depending upon the task in hand.

22. As in other fields of work, there is no sure formula by which to measure the advantages and disadvantages. It depends largely upon the individual taste, which in turn, is conditioned by the degree and type of training and ambition.

23. I think they are but there may be some stinkers.

24. Yes.

Sincerely yours,

Martin W. Johnson
Professor of Marine Biology

MWJ:dk