

STANFORD UNIVERSITY

DEPARTMENT OF BIOLOGY

STANFORD UNIVERSITY, CALIFORNIA

May 15, 1945

Dear Viktor,

I am sorry that I haven't answered your last letter more promptly. I was pleased very much by your warm invitation to come to Woods Hole this summer, and I have been reluctant to pass up the opportunity. However, after my usual long period of indecision, I have decided that I had better not attempt to make the trip this summer. I am technically on duty this summer, and for that reason would feel free to be away for only a limited time. If I used all my 'credit' for the trip east, there would be no time, or perhaps even money, left for me to fulfill a promise I had made to my family and myself to treat ourselves to a vacation which I think we all need. Things have been rather hectic for the past couple of years, and I have an unusual opportunity to take my family to an excellent cabin - in good fishing country- which has been offered to me by a friend. In many respects I would get more pleasure and profit from a visit with you and others at Woods Hole, but on the other hand I'm in a frame of mind and body to enjoy some plain unadulterated loafing, together with some communion with my good but sorely neglected friend, *Saimmo irideus*. I hope you will sympathize with the depravity of spirit which lead me to this decision.

Paul Weiss is now in the west on business in connection with his war research project, and is spending today at Stanford en route from southern California to Oakland.

Please accept my regrets, and my thanks for your friendly consideration.

Sincerely,

*Viktor Turthy*

This is a tentative inquiry, addressed to a few experimental embryologists, concerning the desirability of developing and implementing some plan to facilitate the freer distribution and exchange of living amphibian embryos for experimental use. At present the availability to the experimenter of suitable material varies greatly with the area of the country in which he is located, his knowledge of possible sources of supply, his success in establishing arrangements for exchange of material with other workers in the field, etc. This situation is at best cumbersome, and probably limits the amount and effectiveness of experimental embryological research on the Amphibia.

It is proposed, merely to initiate discussion and elicit suggestions from those who might be interested, that a plan incorporating some of the following features would be helpful in relieving the problem.

1) Preparation and distribution of a list of sources of material. This would include workers in the field who are in position and willing to ship material to others on request, and professional collectors and supply houses. After each individual or organization listed would be indicated the species of embryos which he could distribute, and the approximate time of year during which the material could be supplied.

2) Requests for material; price; containers, etc. In my opinion it would facilitate matters to standardize and simplify procedures as much as possible, and to place the service on an impersonal basis. To this end I would suggest:

a) That participating members agree upon a simple form - perhaps merely a postal card - which could be dispatched with minimal trouble and formality to the appropriate source when material is needed. (It would undoubtedly help if all requests could be cleared through a single agency or individual familiar with all sources of supply, etc., but this would not be essential.)

b) That except for professional collectors a standard and uniform price for all shipments be arbitrarily agreed upon, and that this be paid automatically, without billing if possible, in all transactions, even between individuals who are accustomed to exchanging material. It is believed that all concerned would feel free and respond to requests if this uniform and impersonal practice were observed. Since the profit motive would presumably not be involved, this standard price could probably be small, perhaps about five dollars, which is usually adequate to defray the costs of collecting. A feasible arrangement is to turn over such sums as are received to graduate students or departmental collectors for attending to the shipment of the material. I have used this device to relieve myself of the time and trouble involved, and recommend it as a means of performing the service more or less painlessly.

c) That the possibility of devising containers especially suited for shipping embryos be considered. The gallon thermos jugs now commonly used are generally suitable for shipment by ordinary express, but are too heavy, i.e., too expensive, for shipment by air; and in my experience the pint or quart thermos bottles often prove too fragile for the latter purpose. A small insulated container made entirely of strong, light metal would be ideal. Standardized containers, if made

available by a manufacturer, could be purchased by participating members and sent to the source of supply along with the request for material. The possibilities of shipment by air express are illustrated by an instance in which *Triturus* eggs shipped from Stanford to Montreal arrived at their destination in the four-cell stage.

By facilitating exchange of material between regions of different climate the period of the year during which research in amphibian experimental embryology can be pursued could be materially extended. For example, abundant material is available in California, for shipment to the northeastern states, during months of the year (January, February, March) when embryos are normally not at hand in the latter region. In this connection, it would be especially helpful if one or more colonies of the Mexican Axolotl could be maintained in a laboratory or laboratories willing to distribute eggs when those animals spawn. There have been instances in my own experience, at various seasons of the year, when I was unable to use more than a small percentage of the large number of eggs deposited by a single female, and if requests for such material had been placed in advance it would have been gladly distributed.

If you have any comments concerning the merits or demerits of the plan, or suggestions concerning the means by which it could be best instituted, they would be appreciated.

Victor C. Twitty