

Commentary

Ernst Mayr in Japan, October 1994

“Ernst Mayr wins the Japan Prize” is the title of an article that appeared in the *Harvard University Gazette* (figure 1); the same title headed an article in *Science* (Gibbons 1994). Actually, Mayr won the “International Prize for Biology” rather than the “Japan Prize”, for there are several “Japan Prizes” awarded by several different committees in Japan. Among these, the most famous is that given by Japan Broadcasting Corporation (NHK) for the most excellent TV program of the year. “Japan” is such a convenient term to explain anything from or related to Japan that our world is flooded with the word. The word “Japan” is, however, not sufficient to explain the diversity of the country. For example, there are 237 molluscan species with the species epithet named after Japan, such as *japonica*, *japonicum* or *japonicus* (Goto and Poppe 1996). This is ridiculous. As an obscure person, I would like to propose a new system of nomenclature, in which the species epithet would be expressed by the author name(s) and published date instead of such irresponsible terms as *japonica*, etc. However, Professor Ernst Mayr might not have agreed with me.

The International Prize for Biology was instituted in April 1985 by the Committee on the International Prize for Biology, to commemorate the sixty-year reign of the Emperor Showa (better known as Hirohito) and his longtime devotion to biological research, and to encourage advances in research in this discipline. As a biologist, Emperor Showa devoted his spare time for many years to research on the taxonomy of hydroids from Sagami Bay. He first described two genera of thecate Clathrozonidae, *Clathrozon wilsoni* and *Pseudoclethrozon cryptolarioides* gen. et sp. nov., which

Ernst Mayr Wins Japan Prize

By William J. Cromie
Gazette Staff

At age 90, Ernst Mayr, the Alexander Agassiz Professor of Zoology *Emeritus* has won the 1994 International Prize for Biology.

Awarded by Japan, the prize consists of 10 million yen, or about \$100,000, and a medal. Both will be presented Nov. 28 at a ceremony in Tokyo, attended by Emperor Akihito and Empress Michiko.

Also called the Japan Prize, it is one of the most prestigious in science. Nobel Prizes are not given in biology, but the Japan



Photo by Jane Reed

Biologist Ernst Mayr

Prize and the Balzan Prize—awarded by a Swiss-Italian foundation—are considered equivalents. Mayr has won both.

“I have been active in biology for 69 years,” Mayr said. “This is a very pleasant surprise and a nice reward for so many years of hard work.”

Mayr says he will give the money away, just as he did the \$130,000 he received in 1983 with the Balzan Prize. “I established a fellowship program at the Museum of Comparative Zoology with that money,” he explained. “I’ll give some of the

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Figure 1. An article that appeared in the *Harvard University Gazette*, Vol. XC, No. 5 (6 October 1994), announced “Ernst Mayr wins the Japan Prize”

made him one of the authorities on hydroids. It is therefore understandable that Systematics and Taxonomy was designated as an area of consideration for the prize every tenth year. What is incomprehensible in hindsight is that Ernst Mayr was not a winner of the first or even the second International Prize for Biology, even though these two earliest years of the prize were dedicated to Systematics and Taxonomy as an exception. The winners were E J H Corner and P H Raven. There must have been reasons why botanists received the prize for two consecutive years. I should explain that at that time in Japan, the senior systematists or taxonomists in zoology were weak in both research and politics, compared to their colleagues in botany. It is conceivable that the powerful botanists may have taken the initiative on these selection committees. Another reason may have been that Mayr never accepted Kimura's neutral theory as a primary mechanism of evolution. This may have created some opposition to Mayr's nomination for the first or second International Prize for Biology from within the Japanese science community.

Mayr won the Tenth International Prize for Biology 1994, with an award ceremony and party held on 28 October 1994 at the Japan Academy at Ueno Park in Tokyo, in conjunction with a subsequent two-day symposium entitled "Biodiversity and Evolution" at the same place. In the commemorative photograph (figure 2), 16 speakers and several chairpersons, including myself, surround Mayr, who looks a little tired. Professor Thomas Cavalier-Smith, third to the right of Mayr in the photo, was the winner of the 20th International Prize for Biology in 2004 (he is not a zoologist either, but rather an evolutionary biologist). Perhaps someone in the photograph will win the 30th International Prize for Biology in 2014.

Several days after the ceremony, two people from the press and I interviewed Ernst Mayr at his hotel for an article for a Japanese science journal (Mawatari 1995). Professor Walter J Bock, Columbia University, second to the right of Mayr in the photo (figure 2), welcomed us into the hotel room. Throughout the interview, which lasted for more than one hour, Ernst Mayr was very energetic and answered my questions carefully in easily understandable terms in his husky voice, though he



Figure 2. The commemorative photograph of the Tenth International Symposium on "Biodiversity and Evolution", 29 November 1994, in front of the entrance hall of the Japan Academy in Tokyo. In the front row from the left, Kunio Iwatsuki, Shun-ichi I Ueno, Michael Melkonian, Mark W Chase, Shiro Kobayashi, Ernst Mayr, Tsune-aki Kawamura, Walter J Bock, Thomas Cavalier-Smith, Thomas R Bürglin, James Mead, and Peter H Raven. In the back row from the left, Yoshimichi Doi, Hajime Ishikawa, Isao Inouye, Junta Sugiyama, Shunsuke F Mawatari, Mitsuo Chihara, Nancy A Moran, John R G Turner, Hirokazu Tsukaya, Rei Ueshima, Jun Yokoyama, and Noriyuki Satoh.

sometimes became a bit irritated at the interviewer's poor English. We discussed many aspects of taxonomy, namely, whether taxonomy is a science or not, the status of descriptive science, the hypothetico-deductive method, why taxonomy seems to be declining, Darwinian versus cladistic classification, etc. In the following, a portion of this interview is reproduced:

I asked him "People think that taxonomy is descriptive and, hence, not a science. What do you think?" He answered, "In any science, you have to get the facts first. You cannot make theories without having facts. And in order to get facts, you have to describe what there is. So, the descriptive stage is the beginning in everything or in every science. Ninety percent of the papers that have appeared in famous journals are nothing but descriptive".

Answering my question "Why has something as important as taxonomy begun to decline?" he said, "Of course, one of the difficulties is that the biological diversity is so immense. We have millions and millions and millions of species, while if you work on basic cellular processes, there is a very small number of cellular processes. And so if a person makes a discovery about some cellular process, let's say about how certain molecules go through membranes, that at once is applicable to a very vast realm of life. And so it will interest an enormous number of different people, while if somebody works out the taxonomy of some rather obscure genus of insects, it would be only of interest to the people who are interested in that genus of insects. So there is a great deal more glamour in working on things that have a very wide application in biology than to work on taxonomy, which is always quite specialized. I think that is one of the reasons.

Let's take a clear-cut case. The (current) Emperor works on goby fishes. Now how many people are interested in goby fishes? If the Emperor were working on some cellular process and would make a discovery, immediately the whole world would know about it. If he discovers two new goby fishes, it will interest only the specialists in goby fishes. Now, this is an unhappy fact, but it is a fact. That is why it's so much harder to get people into taxonomy. Now, there are many whole families of insects in which, at this moment, as far as I know, there is not a single specialist in the whole world. And that is something that should not be permitted by the community of scientists".

Concerning cladists, he said, "What Darwin also emphasized is that a taxon must not only be monophyletic, in other words, descended from the nearest common ancestor, but it also must have distinctive features. Different taxa must be distinguished from each other by the degree of similarity and difference. Now the new groups of people, so-called cladists, ignore that, and they say, 'No, it is sufficient to have phylogeny'. So, what they classify is not groups of organisms, or something on the basis of similarity, but what they classify are branches of the phylogenetic tree. Now, since we have evolution, something again the cladists totally ignore is that the beginning of those branches will be very different from the end of the branch".

It is enough. I am very happy to be an evolutionary taxonomist or, in Mayr's words, a Darwinian taxonomist. To use a very loose analogy, I am content to classify the vegetables in my salad as lettuce-like, carrot-like, cucumber-like, or tomato-like plants according to their features or taste; it is not so important to my dinner to classify them by their origins.

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