

Academic Prizes and Awards

1. The Ornithological Society of Japan-Kuroda Prize

Recipient: Tatsuya Amano (Biodiversity Division)

Researcher Tatsuya Amano (Biodiversity Division) became the first winner of the Kuroda Prize awarded by the Ornithological Society of Japan. This prize is given to a young member of the Society who has achieved excellence in ornithology and is expected to be a leader in the field in Japan. This fiscal year 2010 is the first year of the Kuroda Prize. Dr. Amano gave his commemorative lecture at the 2010 Conference of the Ornithological Society of Japan which was held on September 18 at the Narashino Campus of Toho University.

Dr. Amano has been involved in numerous studies, and has published 25 papers in international journals. The Kuroda Prize was given in recognition of his studies in understanding decision-making patterns in habitat selection and movements of birds living in farmland ecosystems with a high degree of spatio-temporal heterogeneity and the development of a behavior prediction model, and his studies in understanding the factors involved in changes in bird populations in changing farmland ecosystems in Japan.



2. Award of the Weed Science Society of Japan (2010 Achievement Award)

Recipient: Yasuhiro Yogo (Director, Organochemicals Division)

Dr. Yasuhiro Yogo, Director of the Organochemical Division, received the 2010 Achievement Award from the Weed Science Society of Japan in recognition of his efforts in the “Physiological and Biochemical Study on Control of Lignin Biosynthesis”.

In this research, Dr. Yogo used some chemical agents which inhibited the formation of lignin, a component of cell walls, to closely examine its effects on plant growth and the lignin biosynthesis pathways, and suggested the possibility of a new site of action for herbicides (weed growth retardants). He also developed a screening system for site of action against coumaroyl CoA ligase, the targeted enzyme (site of action).

These achievements are highly acclaimed academically for having linked plant physiology to weed control, and because they will lead to the development of new types of herbicides.



3. The 28th Japanese Society of Soil Science and Plant Nutrition Progress Award

Recipient: Yuji Maejima (Soil Environment Division)

Senior Researcher Yuji Maejima (Soil Environment Division) received the 28th Japanese Society of Soil Science and Plant Nutrition Progress Award for his study “Pedogenic process and ages of Red soils in Southwest Japan”.

There have been numerous theories with respect to the ages of Red soil-late Pliocene to early Pleistocene, mid-Pleistocene, or late Pleistocene. This study revealed the formation process and ages of the Red soils distributed in southwest Japan; that is, the time required for the Red soils to develop and change in the physicochemical characteristics of the soil.

Senior Researcher Maejima’s study was recognized by the Japanese Society of Soil Science and Plant Nutrition for its significant contribution to our understanding of the genesis of Japanese Red soil and its classification and international comparison. In particular, application of cosmogenic ^{10}Be to dating soils, which have been rarely used in Japan, was highly recognized. The use of accelerator mass spectrometry (AMS) rather than standard mass spectrometry for measurement of ^{10}Be was especially noted as being unique.

4. The 15th Ecological Society of Japan Miyadi Award

Recipient: Tatsuya Amano (Biodiversity Division)

Researcher Tatsuya Amano received the 15th Ecological Society of Japan Miyadi Award for his “Unravelling and predicting the dynamics of organisms at hierarchical scales with ecological modelling”.

Recently, ecological modeling is an important tool in the field of ecology. The ecological dynamics of organisms is usually affected by many factors at a wide range of spatial and temporal scales. Thus, adopting different types of models at different scales would be a powerful approach to understanding the dynamics of organisms efficiently. In particular, in the era of global environmental change, such ecological modeling is essential for the understanding and prediction of the impact of human activities on biodiversity.

Dr. Amano has been working mainly on organisms living in farmlands as objects of research and aimed to understand the dynamics of individuals and populations at multiple scales using both mechanistic and statistical models. At a small spatial and short temporal scale, we can usually obtain a large amount of information on ecological processes of target species. Accordingly, he has adopted models based on individuals’ decision-making (behaviour-based models) to explain how changes in farmland environment affect the dynamics of bird populations. On the other hand, it is generally difficult to explore processes underlying ecological phenomena at a large spatial and long temporal scale. Thus, at such a scale, Dr. Amano has investigated the impact of factors driving biodiversity, such as agricultural activities or climate change, using statistical models that quantify the relationships between ecological patterns and biodiversity drivers. Consequently, Dr. Amano has successfully revealed the spatio-temporal dynamics of organisms at hierarchical scales in an efficient yet effective way.