

JURY REVIEW

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The spirit of the vast rainforest in Malaysia as well as in many other tropical countries is harboured by the unknown diversity and varied functions of its small but important and dominant inhabitants, the insects. All of us are very familiar with insects as they seem to be the most common form of wildlife even in the forests and in urban areas. Field scientists believe that a single tree can be home to more than 40 different species of ants and more than 30% of the animal biomass consists of ants alone. As we constantly lose our tropical forests to socio-economic progress and development, we need to address this constant threats of losing, not only the insects but also our rich biodiversity of plants and animals in general. Insects don't live alone but interact with both the plants and other animals. The number of described and known insect species in the world is more than 900,000 and that of undescribed ones is possibly more and this number varies from geographical region to another. The total number of insect species for Malaysia is not known. However, the country is well-endowed with insect fauna and the science of entomology in the country is flourishing very well with both the systematics and applied research attempting to unravel the beauty of nature and God's creation. Every year some new species of insects are described and illustrated either in photographic forms or otherwise. Insects are the real masters of environment, they inhabit almost every conceivable habitats in our biomes, terrestrial and aquatic. To many ordinary people they are pests as some of them are vectors of diseases and some are quite harmful to us as they bite. But there are many beneficial species which play a vital role in decomposing and recycling of plant and animal matter.

NYAWA's unique effort in exhibiting the splendor of insects is a continuation of its first successful exhibition on fruits that augurs extremely well for nature and biodiversity appreciation. There are more opportunities to expand this exhibition and knowledge dissemination about the insect realm into a bigger perspective involving the insects' interaction with the environment which brings enormous productivity to agriculture, food and medicine production as well as economic loss to the country. Many insects, such as the dragonflies, damselflies, butterflies, moths are very beautiful beings, bees are honey producers, hornets and wasps are biological control agents, ants and termites are occasional destroyers of foods and woods, cicadas and crickets are forest singers, beetles are magnificent labourers of nature and of course cockroaches, flies and mosquitoes are nuisance in homes. Such a scientific display could be extended and transformed into the production of videos and various animation to engage the public's appreciation of the unknown world of insects. The combination of posters of insects, physical displays, insects in videos, colours of insects, insect relative size etc. are possible ways of enhancing the exhibition. What is not well-appreciated and understood is that insects have play some roles in our tradition, folklores and tradition. Many of them have become elements in Malay poems, proverbs and pantuns. How insects behave, metamorphosize and carry out their routine could be an inspiration to artists and designers alike. This is an example of a marriage between science and arts. One aspect that challenge us is how do we make the culture, and plant and animal collections available for public appreciation of the history of nature.

Abdul Latiff Mohamad

The NYAWA '13 programme is about helping the researchers especially the insect scientists (entomologists) express their research findings in the most interesting and effective way to the public at large. I believe that when talking about science many people think that it is a dull, hard and boring subject. They never think that there are a lot of scientific jargons that the laymen might not know. Science usually involve research and its benefit to the world and mankind. Science allow us to explore, discover and learn about the wonder of the nature such as insects.

Insect comprise of more than 75% of living organisms in terms of number and biomass. They could be found everywhere on Earth, from the north or south poles to under our bed sheet. They are really marvelous creatures that have ever been created. Unfortunately, most of us tend to think of all the bad sides of it – pest, dirty, vectoring disease and nuisance, and not surprisingly even some entomologists do not realize that there is less than 1% of insects that are grouped under these negative categories. When we ask people out there what will happen if there is no bees? Their response will not be related to honey that they consume. People never think that insects do many important job for us like pollinating flower – without it there will be no fruits for us; regulating the other insect population dynamic – they are called predator and parasitoid; scavenging and decomposing – without them they would be garbage and dead bodies everywhere now. Insects, especially the termite, is the master of ecosystem engineering and with other insects they play major roles in biodiversity and ecosystem stability.

There are many more that insects can do for us and some of it are in this exhibition and book. We are also

fortunate this day that the automation and various kinds of social media have given us the platform to do the 'magic' presentations. This form of presentation is effective enough to convey the messages to us even to those who never know what insects are all about, what they do for us and what could be learnt from them and so on. Although insects communicate with each other and even with plants by way of Volatile Organic Compounds (VOC) that they release, they cannot do this to us. I used to tell my students and friends that insects cannot 'talk' so we have to talk on their behalf to make people understand what insects do and need? It is natural that people love sound, stories, pictures and go for easy reading. These stimulation of senses will create an interesting combination, with the help of the copywriter, graphic designer and video recorder for the entomologists to present their research findings. For example, a good graphic effects or video recording on related aspects of insect life like the cascade of growth development during immature stages or termed as "metamorphosis" or how clever the bees are in selecting the best and most profitable flowers from which pollens are collected to make honey will 'speak' a thousand words.

In conclusion, no matter what we have observed from the nature and our research findings about insects we should be able to translate it into a form that create the interest of many to know more, appreciate what are the role of insects and contribution to the world and mankind and learn from some of their behaviors for our benefit. As such, I believe that NYAWA '13 is one of many steps to promote people understanding and appreciation on insects.

Idris Abd Ghani

This project is about insects. Insects are magnificent creatures. They are incredibly adaptable and are found to survive successfully in most environments on earth, including deserts, deep sea and even the extremely cool temperatures of the north and south poles. There are many more types of insects than any other types of living creatures in this world. It has been estimated that in terms of number, more than 90 per cent of the animal species on Earth are insects. Insects are important and useful to humans either directly or indirectly. Insects have an amazing number of differences in size, shape, and behavior; the smallest insect fairyfly, from Mymaridea family, with only 0.139 mm length to the biggest Atlas Moths, Katydid or Titan Beetle (measuring up to 28 cm).

There are many insects that are worth a lot of money. For example, the pollination work done for free by insects would cost billions of dollars every year. Think about how much honey costs!. Insects like the praying mantis or ladybird beetles happily take care of our crops by eating harmful insects and thus save money that would have to be spent on pesticides. There are also silk moths that produce silk, insects that produce shellac, and some insects that are canned and eaten in some parts of the world. Insects are also important biological control agents of many agricultural and human pests and food for other living organisms, as well as important in the breakdown of plant and animal wastes. At the same time, insects are major pests of human and domesticated animals because they destroy crops and

carry diseases as vectors. It is estimated that less than one percent of insect species are pests, and only a few hundred of those are consistently a problem to us.

Although insects are commonly considered as pests in just about every region of the world, one must take time to realize their benefits in our daily life. Without the presence of insects in the ecosystems, our world would be a very different place than what we have been enjoying now. It takes a “micro-level” vision of the insect world to truly understand their importance in our life.

In my opinion, NYAWA ‘13 has taken a brilliant step by choosing insects as its focus material this time. The unique and splendid works of art blended with scientific data exhibiting insects in different ways would obviously attract more viewers. The combination of graphic, video, pictures and diagrammes in this project will certainly help scientists presenting their research findings in a simple yet attractive and easy way to understand by even the laymen especially for those who like easy or light reading. The diagrammatic ‘transformers’ will enlighten viewers with the step-by-step transformation of an insect regarding their life cycle educating people how it happens and reveal the magnificent creation of Allah SWT, the creator of the universe. I strongly believe that, this project would create interest to many people to know more about insects and appreciate the contribution of insects to our world.

Abdul Shukor Juraimi