

# chapter

# 1

## Bird O'rama

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The most visible animals on earth are birds. Flying adaptations in birds garner much attention in the field of science and art. The mechanics of flying, the fluidity of its flight pattern, the accuracy of landings, the arrangement of its different types of feathers, the trans-boundary nature in which they travel across continents and oceans; have been subjects of intellectual discourse over the years by both scientists and artists.

All birds are built light. With the exception of the Struthioformes (ostriches, emus, cassowary, kiwi etc.), other Orders of birds have the ability to fly. The relevance of weight saving in birds is significantly profound, evident in its biology. Birds are the only vertebrate group, in which all of its species reproduce using external eggs, minimizing the time during which females must carry a developing offspring in their bodies. The added weight of a “foetus in a womb” would have rendered the females flightless. Birds fill a niche so special in terms of ecological importance in such a way that no other animal can replace, especially when discussing the power of flight.

The bird skeleton is predominantly adapted for flight. The hollow part of its bones is filled with “connecting braces” called struts. These struts provide structural integrity and rigidity. In some parts of the bird, where physical stress from flights occur; the thorax, pelvis and the outer wing, bones which are separated in other form of vertebrates are found fused in birds. Other aspects of weight saving in birds include efficient digestive system and toothless jaw.

Birds, which bear no forelimbs, depend on the movement of their neck to reach most parts of their body using their bills. Some of the most complex muscle movement in birds occur in the neck where there are between 13 to 25 vertebrae compared to seven neck vertebrae in mammals. To a certain extent, some birds such as the owl are able to turn their neck 180 degrees.

Digestion in birds is very efficient. In some birds, digestion period can be as quick as 30 minutes. The main reason for the quick digestion period is to reduce the amount of unprocessed food in the stomach to facilitate weight-saving. Birds, having no teeth, use the gizzard, a chamber in which self ingested grit and rough keratinous lining help to grind solid food.

Birds however, if left alone will not fly. Flying is a very costly activity in terms of energy usage in that it disrupts the general homeostasis of a general animal. In isolated populations where there are no terrestrial predators, such as New Zealand, native birds have evolved convergently into non-flying bipedal animals (kea and kakapo). Birds in isolated populations have no need for flight, suggesting that birds take up to the skies as part of a divergent evolution process. Large-sized birds such as the ostrich and the cassowary have evolved into terrestrial animals due to their relatively heavy weight. These birds, from the Order Struthioformes, have branched out very early from the ancient lineage into the Super Order Paleognathae in which all of its species are flightless, suggesting that during the ancient times, birds do not have the necessity to take up flight. Other examples more recent for this Order of birds are the tinamou, kiwi and emu. These birds however were exposed to hunting and poaching, which resulted in some species becoming extinct, like the Moa

of New Zealand. Another classical example on extinction of flightless birds is the story of the Dodo. The Dodo birds, historically endemic to Mauritius were hunted to extinction over a period of 100 years from its original identification. This exemplifies the dire issue on flightless birds not being able to survive hunting and egg poaching.

Birds have evolved into a very unique class of animal. Birds are distinguished from other modern vertebrates by having feathers, a trait not found in any other class of animals. Feathers or plumage is an object of infatuation by many civilizations before us. The Native American tribes have used pheasant or eagle feathers as headwear, so much that it has become ingrained in our mental image of a fierce looking warrior of the old Wild West movies. Closer to home, the Iban tribe of Sarawak has been using hornbill plumes as body wear for a special cultural identity. Various other examples can be found elsewhere but in essence the unique hue and colours of the plumes is regarded as precious aesthetics by traditional cultures of the world.

Birds can also be admired from its behavioral traits. Unique behaviors such as those exemplified by the bowerbirds, as showcased in this exhibition portrays the ability of the birds to adopt special strategies to ensure species survival. Designing unique-shaped courts and exhibiting unique courting behavior strengthen the belief that birds are actually animals of a certain level of intellect.

Another unique characteristic of birds is that they are able to produce unique vocalizations. The artistic appreciation of bird sound is a traditional form of art, evident in many ancient cultures of the world that hold high value for the beautiful sonnets. A songbird provides an unparalleled source of natural borne songs with melodies soothing to the mind of a listener. The scientific literature on bird sounds and vocalization began

almost 400 years ago. The source of a bird's vocal ability is in fact a unique organ called the syrinx, which is able to produce complex sounds that overlap each other. The vibration of the air column causes sound as it passed the syringeal passageway where the two halves of the syrinx operate independently. This results in the ability of birds to produce two independent voices, which in turn allows them to be able to sing duets by themselves. Most often when we hear songbirds singing we think that the sounds come from two birds but in truth a single songbird can make two voices that can overlap each other to produce complex sonnets.

As a form of food, birds provide resources aplenty for human consumption. The egg has satisfied the palate of generations of human civilizations. Domesticated chicken was found in India since 3000 B.C. and geese were domesticated in the Far East region circa 1000 B.C. Fleshy birds such as the chicken and the duck is a result of thousands of years of selective breeding practices, with the objective of providing alternative source of protein other than mammal and fish.

In the recent years, various parties have taken bird healthcare seriously, with special emphasis on avian medicine and surgery. Medical care for birds is not a novel science but new techniques are developed continuously for the betterment of the discipline. Animal healthcare service providers such as veterinarians work to understand the bird's medical needs, regardless on whether it is a pet bird or a wild species.

The availability on the information on bird care have spread the global importance of avian medicine, in terms of not only treating individual sick birds but also of promoting the health of wild avian populations. Many books, articles

written by veterinarians, practice tips and journal are available on avian medicine or diseases which could provide some highlights of emerging ideas, techniques and procedures that are currently being assimilated into avian practice which is available for pet owners as well as veterinarian. These are the platforms to share information, advice and programmes that reveal the latest development or updates in avian medicine.

Birds have been and always will be part of our lives. Even as babies and toddlers, our level of admiration of its beauty and aesthetics have never wavered. Our fascination of birds sometimes lead to the extinction of some species. Illegal pet bird trade and profound hunting activities resulted from an insatiable demand of birds which originally belongs in the wild. The simplified care and the hassle free maintenance of caged birds made it easy for humans to keep exotic birds. Bird conservation societies have been condemning the cruel method for keeping and transporting tradeable pet birds. As artists and scientists, we at NYAWA promote conservation of wild birds and hope that all wild birds are left in the wild to be enjoyed in its native environment.

In summing up the introduction, as stewards of this beautiful Earth we live in, we hope that all of us can work hand in hand to ensure that the diversity of life, including the birds are respected and protected. Without protection, we would one day be robbed off one of nature's best wonder, the BIRD.



# JURY REVIEW 1

Mohamed Zakaria Hussin

When preparing for this review I found myself searching for the opposite of “meta” — which is something that would mean more than just its content. In NYAWA '15 : BIRD exhibition, the authors have presented their products not only in writing but have illustrated beautifully bird artefacts that capture the motion and emotion of the authors. As an ornithologist, I was dazzled by the well-handled artefacts of birds that brings the magic, mystery, and power of these striking animals into home and established a strong sense of wonder in these captivating artefacts.

The finished sculptures always surprise me -- what evolves from the chunks of paper, straw, wire, plastic, bottle caps, glass, textile, and wood is never what I expected. The exhibited artefacts indicated that the products come through the artists/authors, but not from them. In any case, it is not the end result that matters - which, again, seems to take care of itself -- but the process that matters. I feel most alive and fascinated to see all the finished artefacts as what I have felt when doing bird watching or surveying birds in the forest or even when studying the feeding, breeding or migratory behavior of birds. I can sense the artists love for nature and their spirit struggling with and through them for adequate expression of its sublimely perfect form. In my impression, the artists' intriguing bird artefacts may it be a photo, model, essay, drawing or sculpture have captured the essence of their subjects well and reflects an interpretation of mood and spirit - the spirit of the wild.

I am most fascinated with the shapes, colors, and textures of the artefacts particularly the peacock sculpture which exhibited an unusual style of large birds standing in balance on the ground. The artist managed to create a unique interpretation of birds from the inside out over a number of months. NYAWA '15 artefacts provide viewers with an intriguing observation of the natural world. In fact, some viewers have confused the artists work for the 'real deal' at first glance -- which often triggers a gut-wrenching feeling in the viewer. In a sense, their artefacts examine the raw beauty of nature. They also remind us of what we are at risk of losing

if we fail to take conservation efforts seriously. NYAWA '15 visually powerful artefacts serve to remind us of the pressing need for wildlife conservation.

I have always loved birds. They are beautiful, honest creatures, possess delicate features and represent grace and raw power of flying and freedom. They are my muse and inspiration. The bird is an essential subject in my research and scientific works, but concept and art transformation can be just as important. In many pieces the bird is a visual metaphor for feelings, ideas, and emotions. NYAWA '15 has successfully brought together artists and scientists for a single main objective. As what I called “Artists for Conservation” has an important and useful role in working with, and supporting conservation activities in the field. By bringing an unparalleled pool of talents together through its exciting and innovative programs, NYAWA '15 has achieved its objective in supporting and helping to communicate important conservation issues to the public. Our mission is to support wildlife and habitat conservation and environmental education through art that celebrates nature.

We are now living during an extraordinary period in history. Most who read this may well see over one-third of Earth's species vanish, along with dozens of human cultural lines and languages. The challenge of climate change, loss of biodiversity, desertification, overpopulation, and deforestation - each on its own - stands to adversely affect us all. Together, these challenges represent symptoms of a global pattern of impact by humans on the web of life that supports us. Many artists today are active participants in an important movement, channeling artistic talent toward addressing the challenge of achieving a sustainable future. Undoubtedly, at the forefront of this movement is NYAWA '15 : BIRD.

*“NYAWA '15 : BIRD exhibition gives us all joy, in the creation of it as well as the pure enjoyment of seeing a great work of art. Bird and nature is our unending source of awe and wonder, and that which is the source of inspiration for most of us human being.”*

# JURY REVIEW 2

Nur Syaquila Samsuldin

Woody Woodpecker  
 Donald and Daisy Duck  
 Road Runner  
 Tweety  
 Sesame Street's Big Bird  
 Hawkman, the fictional hero from DC comics  
 The Liver bird on Liverpool's emblem  
 The golden eagle on Manchester City's emblem  
 The black crow on Tonto's head in Lone Ranger Film  
 Hedwig, the famous owl of Harry Potter  
 The famous game apps of Angry Birds  
 Sarawak Bumi Kenyalang  
 To the mythical giant birds of Jentayu and Garuda  
 The traditional sports of sabung ayam  
 The old proverb of bagai pungguk rindukan bulan

These are the well-known animated and mythical birds that are familiar to many Malaysians. They were created to have special personas whilst the mythical birds are said to have special powers. In reality we know that birds are an important element to the environment. They keep the system in balance, helped in spreading seeds and pollinate the flowers, they help to control the agriculture pests, a source of white meat, their saliva and droppings proven to be a good source of income and their charm and elegance managed to capture breeders and collectors around the world. But little do we know of them being a good environmental recycler, a high-profile silent disease carrier and a charmer when it comes to courtship. Today, we saw this winged creatures have inspired us in innovation. The Wright brothers observed the flying birds before building their own airplane. Angry Birds game become a craze and turns into a franchise and how birds' foldable wings inspired the creation of nimble drones.

NYAWA'15:BIRDS exhibition celebrates the collaboration of ornithologists, artists and designers. They combined their science observation skills and scientific discoveries with artistic skills to produce inspiring and informative artifacts. It is encouraging to know that talents from these

two interdisciplinary managed to work out of their comfort zone. Through NYAWA'15: BIRDS, you will be able to see how an ordinary origami birds depict sense of freedom and at the same time informing us that these great migrators can be an infectious disease carrier. The exhibition will also take us to another level of experience as it is also showcasing an artistic birds' artifact that was produced through an art therapy for terminally ill children. It is amazing how artifacts are used to further explain the concept of 'lovebirds' and how birds being great recycler and innovator. And it is much more intriguing to see the artists and designers use artworks that public can relate to such as doodling, masquerading and using everyday items such as tooth paste caps and plastic bottles. In advance to this exhibition, NYAWA'15: BIRDS launched their Birds Photo Challenge through Instagram. This is a great opportunity to encourage active interaction amongst public, bird watchers and enthusiasts through the social media platform.

Let us put our hands together for NYAWA'15:BIRDS for venturing into the aesthetic science learning where public can learn about birds by blending science inquiry and aesthetic appreciation. It is a path that many won't dare venture into. It is well known that some people learn more through sense of vision, while others may learn more through their sense of hearing and touch. The artistic elements from this exhibition will definitely sparks one's interest and magnify the scientific elements and information of the artifacts.

NYAWA'15:BIRDS is catching up fast. With the right momentum and support, NYAWA will be standing next to the big boys of aesthetic science learning around the world such Exploratorium of San Francisco, ArtScience Museum of Marina Bay Sand, Singapore, the Mind Museum of the Philippines and Art.Science. Gallery of Austin, Texas. Perhaps the collaboration initiative between ornithologists, scientists, artists and designers could potentially produce our very own Ned Kahn or Ed Tennabaum. Congratulations to NYAWA for opening up the door to the public and experts to appreciate both Arts and Science!





