WILDLIFE DIARY

August 2012

Great Finds

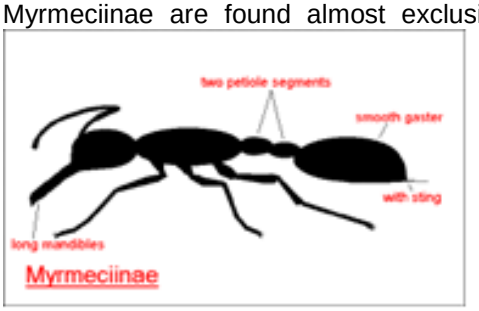
New species of spider to be named *Opopaea douglasi* after Redlands' recently departed and cherished Bob Douglas.

POPULATION MATTERS

Human population density is a general indicator of threats to biodiversity; therefore, where there is rapid human population growth other species in these areas will come under rapidly increasing pressure.

Big Ants

Bull dog ants and jumper ants are in subfamily Myrmeciinae and are among the largest ants, often reaching from 20 mm, up to 45mm, in body length. The Myrmeciinae are found almost exclusively in Australia.



They are easily recognized by their large body size, large eyes and long forward mandibles. Ants in this subfamily are considered to be the most primitive of all living ants. They have a relatively simple social structure. Their workers and queens are about the same size. They are fast and aggressive. They show a strong and well developed sting. They will not hesitate to deliver a painful sting to any intruder. Their nest is usually domed shape covered with plant materials.

Bombardier beetles

Bombardier beetles are predatory ground beetles that belong to the family Carabidae. One member of this family, *Pherosophus verticalis*, has a unique defensive chemical system. The secretory apparatus of the beetle produces an aqueous solution of hydroquinones and hydrogen peroxide, which is stored in a bodily reservoir. When threatened the beetle releases fluid from the reservoir into a reaction chamber, which contains oxidative enzymes, (catalase and peroxidase). The enzyme catalyse an explosive reaction and the boiling mixture, reaching 100°C, with an audible pop discharges in a spray through the abdominal tip. While this species is widespread throughout Australia there are also nine other diverse groups of these insects known to produce compounds, such as acids, phenols, hydrocarbon and quinones.

Did You Know!

Did you know Trees help improve air quality by reducing air temperature, removing air pollutants and providing shade that lowers energy use in buildings? Trees also benefit public health.
http://proceedings.esri.com/library/userconf/health10/docs/esri_health_gis_conf_uf-gis-ph_oct-10.pdf

Trees are major urban infrastructure assets. While costs, and the damage and nuisance values attributed to trees are widely known, the benefits they provide are often subtle and under-appreciated. Cities can be biodiversity hot spots due to the variety of habitats available in public and private open space. Recent studies undertaken by the Gold Coast City Council showed streets with mature trees support far greater biodiversity than those without. In an age of rapidly declining biodiversity this is an important point to consider.

Trees provide economic and ecological service benefits to society. They are assets which warrant the expenditure of resources such as labour, energy and water. Such expenditure is not wasted as trees in urban landscapes provide more economically and ecologically than they use. In any comprehensive and fair calculation trees in urban landscapes are worth more than they cost. Source: Urban Trees: Worth More Than They Cost.
http://www.aila.org.au/lapapers/papers/trees/Moore-UrbanTreesWorthMoreThantheyCost.pdf

Great Walks

Myora Springs a location on the western side of North Stradbroke Island is worth a visit any day. A place where fresh water meets salt, rainforest meets mangroves. It's a very special place.

WWW

Super Quarry – it's back again
http://www.superquarry.org.au/

Wildlife Forum - Brisbane
http://www.wildlife.org.au/about/celebrating50years.html

Habitat Refugia
http://tinyurl.com/3bpbxxk

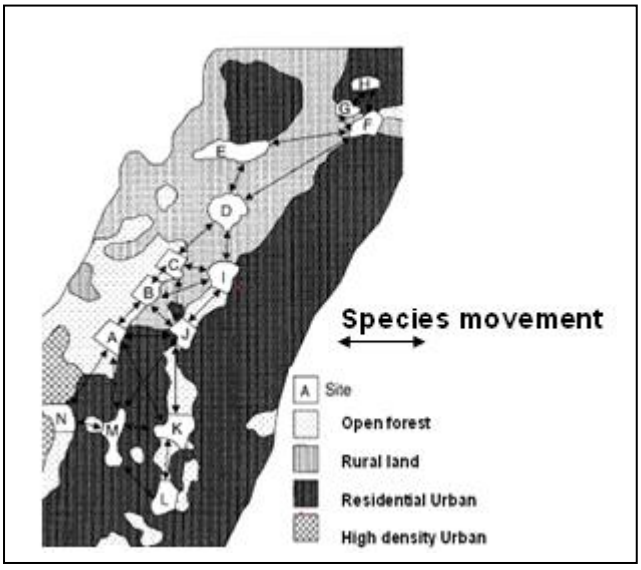
Wildlife Queensland
http://www.wildlife.org.au/

Corridors

There is one theory in ecology that has held true since its creation and that is that a larger patch of bushland will support more species. For this reason core habitat, that area of habitat essential for the long-term survival of a species must be secured if we are to save our biodiversity. The importance of core habitat to the survival of our native wildlife is recognised by local authorities, such as the Redland City Council, which has utilised funds gained through our environmental levy to purchase valuable core habitat. The recent purchase of a large parcel of bushland at Kidd Street, Redland Bay was a very important addition to core habitat. While some may say it was already secure because of its designated land use the unfortunate reality is this provides no certainty today (remember 401 Redland Bay Rd Capalaba) and certainly not into the future. Securing these parcels now as public reserves is one of the few ways to save core habitat from speculative developers and horse trading over what piece of habitat is developed and what is not.

So what is a corridor? One definition is that habitat (an environment suitable for a particular species) corridor is a linear habitat, embedded in a dissimilar matrix (land that surrounds the patches of habitat) which connects two or more larger blocks of habitat and which is proposed for conservation on the grounds that it will enhance or maintain the viability of specific native species populations in the habitat blocks.

Corridors do rely on a matrix of existing but discontinuous natural areas to realize their full potential. In most urban areas the wildlife habitat that does exist is rarely connected and therefore creates a dangerous environment for there are no opportunities for safe migration and little, if any biodiversity which is essential in creating any sustainable habitat.



When one looks across a landscape made up of fragmented natural bushland, farms and urban environments it is not apparent how difficult this landscape can be to traverse for some species. The dispersal capability of a species influences its ability to move through the landscape if at all. One would think flight for example provides ample capability for a species to move between core habitats. Not so, species that are specialists can find it very difficult if not impossible to move across our fragmented landscapes. Research shows that some butterflies could not traverse areas of tall conifers while small bushland birds without understorey could not safely make it between patches of habitat. This same impact can be found with roads and residential subdivision devoid of much vegetation.

Without suitable corridors small patches of bush suffer rapid extinction rates and unless they can be connected they will remain impoverished. This is more so when the remaining patches of habitat are all relatively small in size and the ability for a species to migrate to one or more of these patches is all that saves the entire population from becoming extinct. It is also another reason why councils must purchase what seem to be insignificant small patches of bushland. In the urban landscape entire populations of species are found within such patches. Some if not many of these patches will be source patches, that is, producing more of their kind thus enabling migration. If such a patch was lost the entire population of a species could be lost. Purchasing small patches of bushland because they are recognised as source patches or critical to establishing corridors between habitats can be difficult for those ignorant of the reasoning to understand.

Corridors are essential to any species for every species is required to migrate for survival. Without corridors and diverse landscape available to species, extinction rates increase exponentially. With natural disasters such as flood and fires, wildlife needs options if their current habitat is destroyed. Our landscapes are considered to be a sea of habitat islands and the only way to bring them together is through connectivity brought about by corridors.

Corridors also have positive human function such as barriers for property lines and landscape elements. Tree lined footpaths also create a safety environment for pedestrians, provide shade thereby reducing the heat sink effect, slow down traffic and can reduce noise.

Wildlife need core habitat and it needs corridors for without them extinction for many is assured. When council acquires land for conservation whether it be a small or a large parcel of land be mindful that size and or connectivity maybe the basis of their decision to purchase that property.

Never doubt that a small, group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has. Margaret Mead.

Published by
Wildlife Preservation Society of Qld Bayside Branch
P.O. Box 427 CAPALABA Q 4157
bayside@wildlife.org.au
Auugst 2012