BIODIVERSITY

Statement

HON DIANE EVERS (South West) [10.05 pm]: I rise tonight because a few weeks ago when I was speaking about the importance to the state of Landcare groups and the excellent work they do, I accepted an interjection that suggested to me that the member might not understand the value of biodiversity or the significance of extinctions, so I thought I would take this time to explain this a little bit further. When I talk about the extinction of a species, I am not referring just to larger mammals. I note that the megafauna of Australia was lost after the earliest humans came here. We still do not know the effect of losing that megafauna. However, the Department of Biodiversity, Conservation and Attractions, our own department, has said that 11 mammal species have become extinct since Europeans arrived here. Humans are very good at killing things. When we do not do it directly, we are able to do it indirectly. In addition to extinctions, we are losing genetic diversity. In the case of domesticated plants and animals such as those we depend on in agriculture, we are losing biodiversity in genes, leaving us with less protection against diseases and fewer options for breeding plants and animals that will be better adapted to our changing climate. The same is true in medicine. As we lose this biodiversity within our genetic diversity, we reduce options for developing new medicines. A lot of issues will happen due to extinctions.

The biodiverse systems we are talking about are unlike an electrical system in which everything is quite simple in comparison. We can learn how to use an electrical system. We know that if we affect it with one action, another action will happen. It is all very linear and in some ways very simple to understand, but our biodiversity systems are not like this—they are infinitely variable and completely interdependent. These systems have been developed over millions of years. Evolution and mutations over time can affect biodiverse systems in ways that we cannot imagine. For instance, in naturally occurring evolution, if a mutation in a lion made lions gradually get faster, the fast gazelles would live and the others would die until there were not enough gazelles, and then lions would die out, so that their number stayed balanced and managed. As humans have come into the picture, our technology has allowed us to become killing machines so that we can determine what we kill, and sometimes we overdo it.

There is an example of this and we have to look at the whole system. A German researcher in the last 30 years has been counting flying insects across about 63 parks and reserves in Germany. They have found that the number of insects collected has dropped by up to between 60 and 80 per cent. Where do we go with that? If we are losing these insects, maybe we should find out why this is happening. It so happens that these parks and reserves are next to farms. On the farms, new pesticides, neonicotinoids, are being used. In the 1960s, Rachel Carson wrote a book called *Silent Spring*. This clearly demonstrated to people that we were killing off the insects, so the insect-eating birds were not able to survive either. This related back to DDT. The majority of the world decided that DDT was no longer going to be used because it was a problem. Other chemicals were then brought in but were found, eventually, to be doing the same thing. Now we are back at that place at which we are losing our insect populations. As we lose these insect populations, we also lose a number of insect-eating birds. This leaves us in a terrible situation because we need those insects to pollinate a lot of our plants.

Here is another example closer to home. From 2010 to 2013, there was a massive marine heat event off the coast of Geraldton. About 100 kilometres of kelp forest was lost. Members might not be too concerned about this kelp forest, but of course the kelp forest also provided habitat for a lot of our fisheries, including our lobster industry. This kelp forest has not regenerated. In losing it all at once, we now have turf-like kelp or seagrasses growing in that area. Parrot fish and other fish come in to graze on this seagrass. There is no chance for that kelp forest to come back. It happens around the world. We get back to systems. When kelp is killed off by the heat, we lose lobster. When the insects are killed off by pesticides, we lose birds. How many species are we prepared to lose before we respond? Do we wait until all the pollinating insects are gone and we start hand-pollinating to grow fruits and grains? That does not make a lot of sense. We could simply change our diet and eat only wind-pollinated food. These things are happening more and more quickly. I understand that an area in China has lost insects and they are hand-pollinating trees because the insect that once did it is no longer there. It is not a situation we should be going towards.

The CSIRO explained that there are many causes for the loss of biodiversity, including habitat loss and fragmentation from our own clearing for developments and other purposes, and introduced species. I think that was what the member was referring to when I was talking about the natural resource management organisations. Other causes include stock grazing and poor fire management. Prescribed burning that is too frequent or too extensive can lead to habitat and biodiversity loss. Even irrigation can cause the decline of biodiversity by either changing the flow of the flood patterns or inundating areas that were once quite biodiverse. As I mentioned earlier, it can also occur when pesticides are used excessively and inappropriately.

Human activity is causing extinctions and the loss of biodiversity. As that is the case, human activity can change. We will find that individual species cannot mutate or evolve fast enough to deal with the threats of human ingenuity.

It is up to us to decide what we want. Do we want a healthy and functioning planet to hand on to the next generation of humans or do we want to watch ourselves destroy so much of our planet?