

## SEPTEMBER MONTHLY MEETING : Keith Offord

Have you ever wondered how birds become airborne? Keith Offord, the speaker at the September meeting of u3a, explained how it was done. Basically, birds use air pressure to create lift, just as airplanes do.

Keith explained how birds have evolved from pre-Jurassic reptiles. The proof of this is obtained from fossils of the Jurassic period, 50 million years old. Over a long period, scales were replaced by feathers, which provided insulation so birds could retain their own body temperature. A bird's flight capabilities are determined by its wing loading, defined by relating the mass of a bird to the upper wing area.

Keith went on to describe particular birds which have developed different specialist capabilities. Although ostriches are now flightless, they can run at speeds of up to 50 mph. Vultures, found in hot countries, use thermals to fly and have little need to flap their wings. Many birds need waterproof feathers. Some can produce oil from specialist glands, whereas others need to spread out their wings whilst on land in order to dry. Swifts remain in the air at all times except when nesting and laying eggs. Many wader birds fly in flocks and starlings produce 'murmurations'. The reasons for this behaviour are open to speculation. Some birds have perfected their flight to the extent that they can hover with their heads stationary, e.g. humming birds and kestrels.

Bird migration is one of the wonders of the natural world. About half of the UK's bird species migrate each year, some taking short journeys, others travelling thousands of miles. Arctic Terns make a round trip of about 22,000 miles each year and one has been identified as 30 years old, having travelled nearly 700,000 miles in its lifetime. Also, it appears that bird migratory behaviour is genetic rather than learnt.

This was an excellent presentation with stunning photographs and delivered with humour and enthusiasm.



**A Brown Pelican**