



THE UNIVERSITY OF THE THIRD AGE

# Romsey and District U3A

## Registered Charity N° 1082501

**JOHN GOULD**

### **New Ways to Look at the Ocean**

Dr John Gould gave the Romsey and District U3A an enthralling glimpse into the world's oceans at their August meeting. He explained all the difficulties involved in studying oceans and why they are so important to us all. The science of oceanography has changed over time. Now we are able to take pictures from space the surface of the planet is shown to have very large areas covered by water, much of it stored in ice-caps, oceans, lakes and rivers. The varying depth of water is shown by different colours. Oceans store heat and move it around the globe, the Atlantic alone generates a thousand million megawatts. The depth of water in the oceans varies greatly; at its deepest it measures five kilometres. Light and radio waves do not penetrate water so finding ways of studying the oceans is more difficult than studying space.

In the early 1800's HMS Challenger set sail on voyages to discover the secrets of the seas. Since then ships have been used to transport scientists and their equipment all over the world to study oceans. In the 1920,s the Discovery took over from the Challenger and from then until today the name Discovery has been used for all the vessels involved in the study of the seas. In 2007 the latest Discovery set sail with the scientist James Cook on board, this ship is smaller than a channel ferry so conditions are rather cramped. Thin wires are used to lower instruments which are contained in a large bottle like container. Modern thermometers can work under extreme pressure which enables the temperature at extreme depths to be recorded. Dr Gould showed a slide of the oceans covered in a mass of coloured dots each one representing the site of an instrument called a vertical profile. 20,000 profiles are collected at regular intervals.

Throughout the past fifty years there have been many steps in space satellites, from the Russian 'Sputnik' in 1957 to today's countless numbers circling the earth. It is now possible to measure the shape of the ocean surfaces to an accuracy of 2cm! The passage of El Nino can be followed from space and this helps in the forecasting of hurricanes. In Britain accurate weather forecasting made possible by receiving data from the satellites circulating the earth is very helpful to farmers, sailors and those involved in the construction industry.

At the end of his talk Dr Gould was inundated with questions, from which it was clear that a return visit by him would be much appreciated by everyone present.

Pat Morgan.

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