



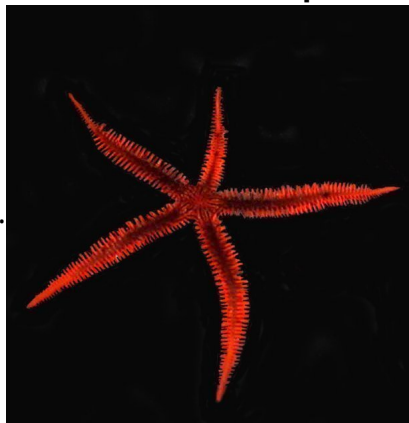
Extraocular Vision

 drishtiias.com/printpdf/extraocular-vision

Why in News

For the first time, researchers have shown that a **species of brittle stars** can see even

though it does not have eyes.



- The **ability to see without eyes is known as extraocular vision.**
- The red brittle star (*Ophiocoma wendtii*) has become only the **second creature, after a sea urchin species**, known to have the extraocular vision (barring rare cases in other species).
- In sea urchins and brittle stars, researchers suspect that extraocular vision is facilitated by the **photoreceptor cells found on their bodies.**
- The researchers suggest that a brittle star sees with the help of **light-sensing cells that cover its entire body.** These light-sensing cells give the brittle star visual stimuli, allowing it to recognise coarse structures such as rocks.
- Another peculiar feature of the red brittle star is its **signature colour change.** While the creature is deep red during the day, it changes its colour to beige at night.
- The researchers think that there **may be a link between their extraocular vision and colour changing abilities** since the responses they saw in the creatures tested during the day, disappeared in those that were tested at night.

Source: IE