



Tide Tables

The Oregon Coast has many old salts who know a thing or two about tides. Seek out those locals and access the information provided by the local newspapers and on the internet. Oregon Coast TODAY publishes a weekly tide chart (see page 17) and there are several tide apps available online. I like the visual representations provided by a NOAA app entitled Tide Alert.

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Tide and peek

Just when things are looking up — look down

By **MICHAEL EDWARDS**
For the *TODAY*

A purple sea star wraps its five rigid arms around a barnacle encrusted California mussel. Employing hundreds of tiny, hydraulically actuated tubed feet in unison, the sea star breaks the bivalve's tenacious seal. With the mussel's formidable defense penetrated, the sea star extends its cardiac stomach from its mouth and into the mussel's exposed soft flesh. After it reels in its bloated viscera and transfers the mussel's liquifying tissue into its pyloric stomach for further digestion, the voracious hunter's nerve network signals that it is feeding in

a desiccation zone, so in order to ensure survival, the sea star creeps along the rock and back into the cold, roiling sea.

For more than 300 million years, animals like the sea star and the California mussel have adapted to, and even thrived in the Pacific Coast's harsh and ever-changing intertidal environment. Some of the most inconspicuous creatures living in the tide pools are also its most highly adapted. To most of us, the humble keyhole limpet might easily be missed, but to a scientist, the small snail presents a treasure trove of unlocked secrets.

Marine scientists in the United Kingdom have discovered that the tiny teeth of the limpet are five to six times stronger than the silk web of a spider and even stronger than Kevlar. From these findings, engineers extract ideas that could become to the



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