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building blocks of inventions that will add strength and durability to commonly used products. The giant keyhole limpet of Southern California produces haemocyanin, a chemical that is used to fight bladder cancer. The limpet's Hulk-like strength and its production of cancer-fighting agents are direct byproducts of the creature's evolutionary journey to figure out how to stick to rocks while simultaneously grazing on algae, all the while being pummeled by waves one minute and baking in the sun the next. Along with surviving the tidal shifts and incessant pounding surf, limpets and related mollusks of the intertidal zone are popular menu items for birds.

Pacific tide pools are the permanent home for a variety of unique birds and a stop-over site for others. Flying in tight formation, sanderlings coordinate a landing at the surf's leading edge where they probe the wet sand for mole crabs. By their synchronized movements, these little "caffeinated" shore birds give the appearance that they are engaging in communal telepathy. Away from the sanderlings' shrimping grounds in the swash zone, four whimbrels stalk the mudflats for prey; their long decurved bills are perfect for probing deep into the burrows of fiddler crabs. Beyond the visible rocks, a "raft" of surf scoters dives beneath the pounding surf, each bird prying a mussel from their prized beds 25 feet below the surface. These bright beaked sea ducks swallow the mussels whole, pulverizing the bivalves' shells in their gizzards. The next time you notice an iridescent blue tint reflecting off a beach-going child's galactic sand castle, know that that blue sheen might be from mussel shells

that passed through the gut of a surf scoter. Unlike the iron-gutted scoter, perpetually irritated oystercatchers and industrious turnstones hammer through and chisel under the hard calcium carbonate shells of tasty goose barnacles.

In order to see these, and other, often well camouflaged birds better, bring binoculars.

From Roads End to Spanish Head there are several tide-pools for people to explore. The tide pools are fun, fascinating and, depending on how low the tide is, accessible places to visit. But as we are reminded of all too often, the ocean is an unforgiving place. Keep your eyes seaward, know the status of the tides before you go out onto the rocks and understand that brown and green algae that you see is as slick as a rampaging pig covered in olive oil. It isn't always possible, but try to step onto bare rock rather than on anemones or shellfish. Finally, treat the tide-pools as you would a designated wilderness area. Take from your visit photographs and memories and leave the exotic creatures for others to see and enjoy.

Hidden within the intertidal labyrinth are wonders both known and unknown to science. Maybe due in part to the curiosity triggered by their trip to the tide pools, that child eating the sand coated egg salad might someday be a part of an OSU research team that discovers an algae whose chloroplasts produce a chemical that cures macular degeneration. At a minimum, your family will get a few unplugged hours in the sea air, exploring alien-like creatures together.

Time spent exploring nature is never time wasted.



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