

THE FOSSIL RECORD

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Field Trips:

THE HISTORY OF THE NORTHWEST

NW Oregon Coast

Marine formations in Vernonia area

Date: Saturday, October 14th, 2017

Cost: \$15 for non-members (families \$25), Free for members.

Call: (503) 358-9030 or
e-mail blitz124@comcast.net

Trip leader: Dave Taylor

The trip will focus on 35 million year old rocks from the Keasey Formation. This formation was laid down in NW Oregon in a marine setting. It is especially interesting in that it has a remarkably diverse array of animals – including a rare sea creature, the sea lily (or crinoid) – a flower-looking animal related to the star fish.

The coast range in the Vernonia area preserves a series of marine rock formations ranging in age roughly from 20 to 40 million years.

The oldest formation exposed in the area, the Cowlitz, has been a main source of natural gas (Mist Gas Field), and so is of economic importance locally. It is the clean sands within the formation in which the natural gas accumulated. Mudstones capping the sands have kept the gas from escaping to the surface.

Above the Cowlitz is the Keasey Formation, which is siltstone rich in volcanic glass. Above is sandstone and mudstone of the Pittsburg Bluff Formation, which we will look at briefly, and the Scapoose Formation.

One locality in the Keasey Formation, near the town of Mist, preserves the sea lilies mentioned earlier. These were once abundant shallow-water animals but are rare in rocks 60 million years or younger. These are fascinating creatures that often have a stem and five “feathery-looking arms”. While many grow attached to a hard surface, they may be detached and move along the bottom of the ocean. At Mist we are likely to find parts of crinoid stems and arms. To see a living sea lily in action, on your browser type, “crawling crinoid”.

Meeting time: 9 a.m., Saturday at the Mariolinos Restaurant in Vernonia. 721 Madison Avenue. (503) 429-5018. To get to the restaurant, as Hwy 47 makes a right turn going into Vernonia and starts heading east – go two blocks and then turn right onto Madison Avenue. The restaurant is on your right at the end of the block.

Note: Bring a rock hammer if you have one. I have extra hammers in case you do not. Sample bags and tissue for wrapping specimens will be handy. The crinoid exposure can have some debris rolling down the slope on occasion. I will point this out so that we can be alert to this and stay safe. Bring rain gear in case the forecast calls for a wet day. For those who are especially venturesome and want to wade into a stream, you may wish to bring along an extra pair of dry shoes and socks. Please bring a sack lunch as we will not be in Vernonia during the noon-hour.