

**Time:** 3:50 - 9:30 pm

**Weather:** PC 35 mm; RH 83%; BP 101.1 kPa; calm; cloud/sun; T 27° C

**Activity:** Rain gives Kee an excuse to probe the past.

As I drove down the track to the Lower Meadow, a Red-tailed Hawk swooped past me in front of the van. This sort of fly-past is fairly common, happening about one visit in a dozen. I was happy to see so much rain in the gauge. Once again it appeared that drought conditions would be held off for a time. Presently, I hoped it wouldn't rain.

At first, the weather looked as though it would cooperate with the visit. It had been largely sunny during the drive down Highway 2, after all. I took a walk to the river, noting two Eastern Gray Squirrels (black) on the way. I climbed the bluffs to see if I could spot the level at which no more shale or limestone emerged from the brown loam. I found the point of emergence was higher than I thought, a good half way up the slope.

Splatters on my person told of impending rain. So I repaired to the trailer just in time to avoid a soaking. Two White-footed Mice ran across the floor as I pondered how to spend my time while waiting for the rain to end. It never did, quite. Clearly it was time to review the ancient history of Newport Forest,

### **Newport Forest in Paleozoic Times**

Mussel Beach borders the river at the base of a bluff system that is constantly eroding into the river. As it erodes it discharges granitic rocks. Geologists call them "dropstones", from a glacial epoch that ended barely 11,000 years ago. They come from the Erie Lobe of the Laurentide ice sheet and can only have come from the Precambrian Shield, several hundred km to the northeast.

More interesting and far older rocks also decorate the beach: very heavy, reddish-brown stones that natives call "thunderstones", numerous fossils, mostly brachiopods (that resemble mussels, but aren't) and shale in the form of large flakes or splittable rocks. The thunderstones are associated with the shale and apparently form in shale beds. All of this, combined with occasional large pieces of fossiliferous limestone bedding, point to the possibility of a shale/limestone stratum behind the soil overburden of the bluffs. The telltale rocks end about half way up

the bluffs. That would mark the approximate level of such a shelf.



Here we have assembled typical finds from the beach/bluffs locale. The uppermost rock is a piece of old sea bed with a brachiopod embedded in it, with a freed brachiopod lying beside it. Both brachiopods belong to the genus *Spirifer*. A much larger brachiopod lies to the right. It belongs to *Paraspirifer* and is not wholly freed from matrix. But one can make out the beak of the former shell.

Three thunderstones occupy the bottom half of the image. The largest is from the Newport family collection (given to us) and the two smaller ones are more typical of the stones we routinely see on the beach. They are mostly iron sulfide and all are extremely heavy, relatively speaking.

Few people realize that the continental “craton” or core of the North American continent (called “Laurentia”), once lay astride the equator and was turned nearly 90° clockwise from its present orientation. The Kaskaskia Sea was an inland or “epicontinental” sea that flooded the continent from the west, where California is presently. It extended almost to the foot of the “Acadian Orogeny” a chain of

snow capped mountains larger than the Himalayas and presently eroded down to the Appalachians. As eons passed the sea would regress, leaving mudflats in river deltas, since metamorphosed into shale. Then the sea would advance again, leaving shale and limestone beds that tended to alternate, but of widely different thicknesses. The sea was quite shallow, barely deeper than present day Lake Erie.



This highly approximate rendering does not show any inland seas. One can see that “Newport Forest” was at that time about 20° south of the equator. Since it is now (well) north of the equator, it must at one time have had the equator passing directly through it!

The continents shown above were in the process of joining together into one supercontinent called “Pangea”. The assembly was complete by the Permian Age, which succeeded the Devonian.

Every time the Kaskaskia regressed, thick forest would quickly take over the

exposed land. How many times did our area become reforested? The following image gives an impression of forest of that time. Seed Ferns and Cycads for example, were accompanied by the first land animals, as shown in the following image. These were mostly amphibians of one kind or another.



Carlton University -- unattributed

We leave our readers to dream of earlier times while I prepare to leave the site.

The rain did not end for good until sunset, when two Raccoons appeared near the trailer (continuing the theme of mammals in twos). They appeared to be kits of Celia, a mother who seems to have denned under the trailer. I left the property, little realizing that a mysterious experience lay just ahead.

### *post script*

I was crossing the Morrison Road Bridge into Wardsville (about 3 km from the property) when I nearly hit a large black animal. The headlights caught the eye-shine (yellow) from the animal as it turned double on itself to avoid being struck. All I can say is that it was somewhat larger than a Coyote and definitely not that animal. And it was definitely all black. Under the circumstances, I can't be entirely sure that it was a large black Labrador.