

(Address Correction Requested)

Fall, 2000

John Day Fossil Beds National Monument Newsletter **National Park Service, U.S. Department of the Interior**

Anniversary Celebrated ...

John Day Fossil Beds National Monument observed its 25th birthday this fall, having been officially established as a monument in 1975. Neighbors and visitors were invited to the Sheep Rock Unit visitor center to help the staff celebrate the occasion on Saturday, September 23. Several programs were offered for the public, including an auto tour of the Sheep Rock Unit, a ranger conducted hike into Blue Basin, and several tours of the monument fossil laboratory conducted by the paleontology staff.

As an added attraction, Lillian Mascall, of Dayville, Oregon, was present for several hours. Born and raised in the Cant Ranch house (which is now the monument visitor center), Lillian passed on stories of her life and times growing up on the James Cant Ranch to many appreciative visitors and staff. Assisted by Superintendent James Hammett, Lillian also cut a huge birthday cake in honor of the twenty-five years of monument status. A good time was had by all.

Old Program Returns ...

With the goal of offering the public more diverse interpretive programs, the monument brought out of the closet a dusty old ranger conducted program that had not been offered in a couple years, the Blue Basin Hike. Two years ago this 2.5 hour program had been conducted each weekend during fair weather and featured a ranger conducted walk and talk into the remarkably colorful and fossil prolific Blue Basin. The last time this program had been conducted attendance had been minimal, and visitor services staffing limits were stretched in attempting to offer the program weekly.

This year the 2.5-hour program was offered only once per month, and advertising was increased greatly, reaching throughout the state. It has proven very popular, with attendance rising from about five people per hike in 1998 to 15 to 20 people this year. With this success, the monument will continue to offer this special program in the upcoming year

during the spring, summer, and fall (staffing permitting).

In addition to the renewal of the Blue basin Hike, a totally new program, The Sheep Rock Road Trip, was field tested in late 1999 and offered each fair weather month in 2000. With the ranger in the lead vehicle for this auto tour, visitors would follow in their personal vehicles on a twelve-mile drive through the Sheep Rock Unit of the monument. At four stops along the picturesque drive all would park and gather around the ranger for a discussion of the wonderful landscape before them. The largest tour this year had 33 participants in 13 vehicles following the ranger. This highly successful program will be offered again in 2001.

Festival a Damp Success ...

Painted Hills ranger Jenny DeLuca and the Wheeler County News reported that the fifth annual Painted Hills Festival was an enthusiastic success. The town of Mitchell was alive with activities Labor Day weekend, and though there were clouds and spots of rain, everyone had a grand time. No one complained about the rain as it was desperately needed.

Friday evening ranger John Fiedor presented a slide show explaining the geologic features and fossil story of the monument. Races were conducted during the festival and the half-marathon race was won by Ron DeLuca (yes, the ranger's husband won the half-marathon reclaiming the title "fastest man in Wheeler County"). There were a large number of entries for the parade on Saturday, including a decked out fire truck and smiling rangers from the monument.

During the parade, ranger DeLuca volunteered to wear the monument Pogonodon (cat-like sabertooth) suit, known to the locals as the "giant gerbil." "Pogo" was a hit. After the parade rangers Sarah Herve and Jenny Deluca manned a street exhibit featuring the John Day Fossil Beds, answering many questions from curious townspeople and visitors alike. For the festival,

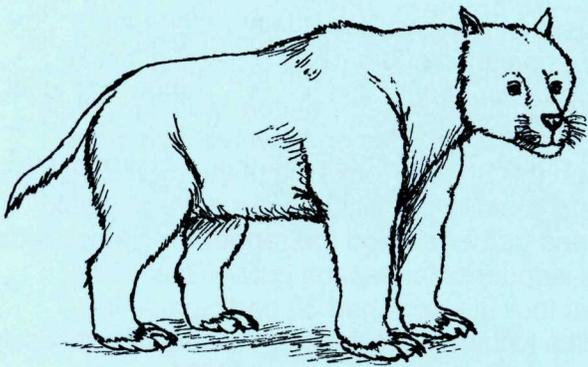
Jenny also got talked into storing eighty frozen chickens in her freezer at home. That's a lot of yard-bird! Picnicking, singing groups, and an arts and crafts show rounded out the weekend events.

News from the Prep Lab

Lab technician Matt Smith reports that this has been a productive year in the prep lab. Current projects include a nearly complete set of upper teeth from a primitive horse. One of the most interesting features of this fossil is that the teeth are all that remain. They are in perfect alignment to one another, but the skull that once held them has disappeared completely. This was due to an unusual diagenetic process. Some millions of years ago the bone dissolved away leaving the teeth to sit alone.

Another project involves a huge *Promerycochoerus* (oreodont) skull that was collected last year, which is very slowly revealing itself. The matrix surrounding it was as soft as you could please on the outside, but close to the bone it is as hard as any Matt has worked with so far.

We are also doing our part with public education by creating replicas of the skull of a large amphicyonid, or bear-dog, known as *Temnocyon*. One replica will go to the interpretive staff who will then be able to show visitors the creature's fearsome teeth and powerful jaws.



Now extinct, some bear-dogs may have looked like this.

Earlier this year a turtle skull that GIS technician Delda Findeisen discovered became Matt's top priority. It arrived in the lab in many pieces which, when assembled, turned out to be the only cranium known from the kind of turtle that the Turtle Cove Formation was named after, *Stylemys*. Fractured and broken as it was, some careful work revealed a beautifully preserved specimen, which even preserved the hair thin stapes or inner ear bone. It took almost 140 years of field work to fill this particular gap in our knowledge. Hats off to Delda on her discovery.

A parade of canid fossils has been making its way through the lab earlier this year. One of the more interesting specimens included a partial skull that had a puncture mark - probably from a tooth - that entered the forehead and exited right through the roof of the mouth. Another was a *Mesocyon* skull which showed a suite of pathologies derived from a badly broken upper jaw. A very strange specimen, which preserved the back half of a dog skull sandwiched very tightly into the crook of an oreodont's ankle, also showed up. This specimen foiled the attempts of three different preparators to separate the skull from the ankle owing to the

extremely hard matrix, the tight fit of the bones, and the delicacy of the skull itself. Luckily, it has finally come apart and with further dissection we can get a better idea of exactly what kind of dog it was.

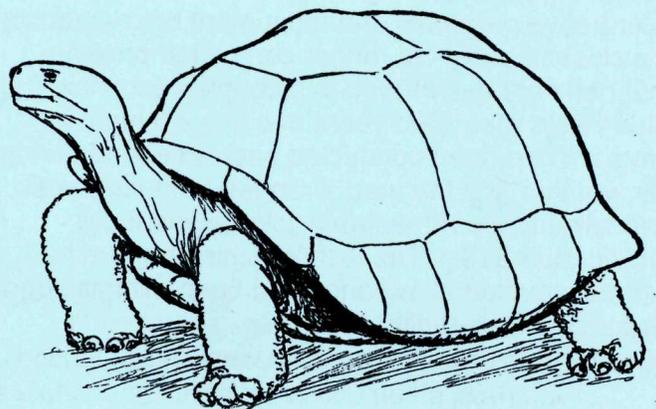
In casting and molding news we have helped the park education staff with the creation of replicas of various species of horse teeth and a partial skull, all to be included in the education program fossil horse kits. Education program coordinator, Jennifer Chapman received a crash course in casting and molding and has successfully created several replicas of her own for educational purposes.

Museum technician Al Pajak and Matt finally created some passable replicas of Al's rodent tooth assemblages, from Lone Rock area, using a combination of slow and fast setting polyurethane resins. Hopefully, if we can modify the centrifuge, a nice donation from the Blue Mountain Hospital, we can take a lot of the trial and error out of creating further examples of these handy little rodent casts.

Lastly, we have discovered, through experimentation, that the biodegradable packing peanuts made from corn starch do not react and melt in polyurethane resin like the regular Styrofoam ones do. This makes them very useful as a filler material by taking up space in replicas and reducing the amount of casting resin required. Casting and molding companies provide plastic beads created just for this purpose, for a price of course. Using the corn starch peanuts we save money on resin and manufactured plastic beads. But, perhaps more importantly, we have found one more way to use an earth friendly product, which helps keep our National Parks green.

Kids Will Dig This ...

The monument's challenging Junior Park Ranger program has been in existence several years with dozens of successful participants. Joining the JPR this winter is the Junior Paleontologist program. To become a Junior Paleontologist participants need to complete three activities: a study of comparative anatomy, a field trip to a fossil museum or fossil site, and the preparation and submission of field notes about their trip. These activities are not restricted to John Day Fossil Beds, but can be completed elsewhere. Rewards for successful completion include a certificate of achievement and a pre-scheduled, inside look at our fossil laboratory. Look for this program, coming soon, on our website www.nps.gov/joda, under the education link.



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