PALAIOS

Emphasizing the Impact of Life on Earth's History

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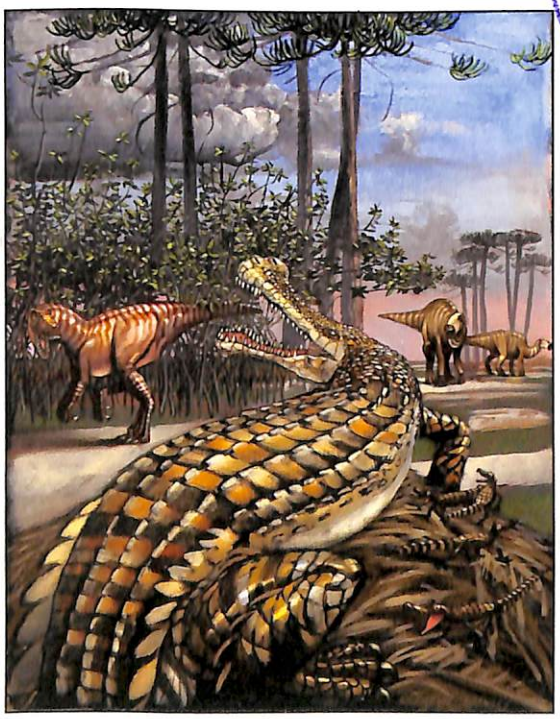

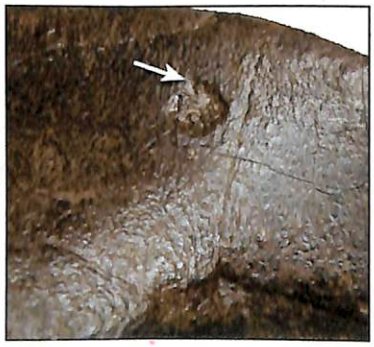

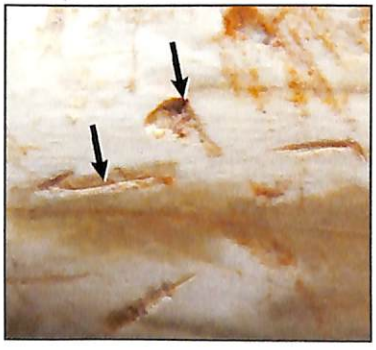

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Volume 27, No. 2 February 2012

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RESEARCH NOTE

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COVER EXPLANATION: The Arlington Archosaur Site (AAS) from north-central Texas represents a diverse Late Cretaceous ecosystem; 100 million years ago, Dallas, Texas was a coastal delta plain on the eastern shore of the Interior Seaway, inhabited by giant crocodyliforms and dinosaurs. Tooth marks on numerous turtles and ornithopod fossils from the AAS are attributed to a new taxon of crocodyliform. This large collection of marks highlights the crocodyliform's predatory behavior and its larger role in the AAS ecosystem (photos by Chris Noto, Stephanie Drumheller, and Derek Main; artwork by Clinton Crowley; see Noto et al., p. 105 herein).

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Volume 27, No. 4 April 2012

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COVER EXPLANATION: Siliceous hot spring stromatolites and their microbial fabrics from Obsidian Pool Prime (OPP), Yellowstone National Park, Wyoming, United States. Left: margin of OPP showing flat-topped siliceous stromatolites attached to the rim of the pool and isolated forms. Right (from top to bottom): photomicrograph of the fenestral fabric developed within the stromatolites, consisting of rounded pores and hourglass-shaped filament bundles; comparison of the fabric from OPP stromatolites and the resulting fabric that might be preserved in a stromatolite from the rock record; scanned thin section showing the morphology and mesostructure of the stromatolite examined in this study; scanning electron micrograph of a rounded pore from the stromatolites showing that pores are three dimensional and interpreted as fossil gas bubbles (see Mata et al., herein p. 206).

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Volume 27, No. 6 June 2012

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COVER EXPLANATION: Examples of *Arpylorus antiquus*, isolated from upper Silurian rocks from southern Tunisia, associated with fragments of eurypterids. In upper left corner, SEM and optical views of the same specimen illustrating attachment of the structure described as *Arpylorus*, to fragments of membrane. At right, two other specimens in dorsal view, showing the polygonal opening with operculum in place or not. This opening, reminiscent of the archeopyle of dinoflagellates, has maintained the misinterpretation of *Arpylorus antiquus* as a possible dinoflagellate in previous studies. The authors suggest a possible relationship with eurypterids, which are represented by abundant fragments in the palynological assemblages. Two examples: a cuticle-like fragment of eurypterid, and a structure interpreted as a respiratory organ for this Paleozoic arthropod group (see Le Herisse et al., herein, p. 414).

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Volume 27, No. 8 August 2012

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COVER EXPLANATION: Unusual tubular fossils associated with microbial crusts from the Middle Jurassic of Poland. Upper left, an exposure of Middle Jurassic (Bathonian) clays at Ogrodzieniec in the Polish Jura; lower left, ESEM pictures of morphology and structure of the Middle Jurassic tubular fossils interpreted as remnants of agglutinated polychaete tubes; lower right, two pictures of tubular fossils encrusting oncoid and concretion; upper right, two pictures of recent agglutinated polychaete tubes from Japan (see Zatoń et al., herein, p. 550).

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Volume 27, No. 10 October 2012

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COVER EXPLANATION: The Upper Cretaceous (Campanian) Pierre Shale was deposited in an epicontinental sea that covered most of the Northern Great Plains of North America (outcrop, middle left, along Elm Creek, Meade County, South Dakota). It contains a rich molluscan fauna including ammonites (top center, bottom left, right), bivalves (top right, bottom center), and gastropods (middle right). The fossils typically occur in early diagenetic concretions that preserve the original mineralogy and microstructure of the shells (top left) (see Landman and Klofak, p. 672 herein).

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Special issue commemorating the 20th Anniversary Meeting of the International Workshop of Plant Taphonomy, Carole T. Gee and Lutz Kunzmann, Guest Associate Editors

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COVER EXPLANATION: Calcareous tubeworms as disaster species flourished in the shallow marine microbialite ecosystem as well as in deep basin environments after the end-Permian mass extinction in South China (see He et al. p. 878 herein).