

## A Small "Rancho La Brea" Site Discovered in Cuba

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### "MANANTIALES LAS BREAS DE SAN FELIPE": A FOSSILIFEROUS TAR SPRING

A joint field palaeontological expedition from the American Museum of Natural History (AMNH), New York, and the Museo Nacional de Historia Natural at La Habana (MNHNH) took place between January 27<sup>th</sup> and February 4<sup>th</sup>, 1998. The expedition, under the leadership of Dr. Manuel A. Iturralde-Vinent (MNHNH) and Dr. Ross D. E. MacPhee (AMNH) included other researchers from the MNHNH (Stephen Diaz) and the AMNH (Ines Horovitz and Marcelo Sanchez-Villagra). During this field trip an important new type of palaeontological site for the Caribbean was discovered and excavated - a fossil-bearing natural tar spring located near the city of Mart, in the Matanzas province of Cuba. This field research was supported by a NGS grant to M.I.V and an AMNH grant to R.D.E.M.

The site is located within a low plain which is underlain by serpentinites with an *in situ* iron-rich argillaceous weathering crust, not far from the north shore of the island. It is surrounded by small hills built from Miocene limestone. Active tar springs, generally with small sizes, are distributed over an area of nearly 5 km<sup>2</sup>, and are largely covered by the introduced African Spine Tree *Marabu*. Asphalt was formerly extracted from two wells in the area: the J. B. Hamel Mine and the Victoria Mine.

The new fossiliferous asphalt spring site here named the "*Manantiales Las Breas de San Felipe*" is located just 15 m east of the J. B. Hamel Mine. It is a natural asphalt spring, now inactive due to the exhaustive exploitation of the nearby asphalt well, which was worked until 1961. Nearly 5 m in diameter, the original natural spring is surrounded by a thin layer of dried asphalt, locally containing embedded fossiliferous material including wood, insects(?), and a large quantity of bones (preliminarily identified as

crocodile, turtle, rodents, sloths, and birds), some of very large size. Within the asphalt articulated arm bones of a sloth were located associated with other elements of the carcass, suggesting that the animal was trapped alive in the tar pit. From this place we were able to recover several tonnes of fossiliferous matrix, which will require extensive mechanical and chemical preparation. The age of this deposit remains unidentified, but the presence of Pleistocene molluscs in a nearby asphalt spring, the occurrence of extinct animal remains in our site, the evidence that the asphalt layer overlies the *in situ* serpentinite weathering crust, and the fact that the deposit formed after the emergence of the plain, late in the Miocene, suggest that the age can be as old as latest Miocene and as young as early Holocene.

Another expedition with the participation of M.I.V, S.D.F. and R.R.C. late in 1998 relocated the original asphalt site, briefly described in an unpublished report by W. D. Chawner in 1932, just 100 m NW of Hamel Mine. This locality is richly fossiliferous and contains a mollusc fauna, to which Richards (1935) assigned a Pleistocene age, although the reasons for this age determination were not explained. Berry (1940) reported seeds impregnated with asphalt from the same site. This second site is highly fossiliferous, and is now under study. A full report about the Las Breas de San Felipe will soon be available.

### REFERENCES

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