

**SUPPLEMENTARY DATA**—Taxonomic compositions, and skeletal preservation and distributions at TBB2001, TBB2002, and TBB2005.

#### TBB2001

TBB2001 has yielded five articulated, partial-to-complete specimens (V15297, V15298, V15299, V15300, V15301) representing a minimum of four individuals of small theropod. All are assignable to *Limusaurus inextricabilis*. With the exception of V15301, all these specimens are incomplete due to erosion. V15297 and V15298 occur at about the same level near the base of the block. V15299 and V15300 occur at about the same level at the top of the block, where they are superposed 16-20 cm above V15297 and V15298. V15301 was collected from the excavation trench beside the block and its original stratigraphic position relative to the other specimens is unknown. The matrix has been completely removed from all specimens and, with the exception of V15301, all specimens are mounted in a silicone resin cast of the semi-prepared block that preserves their original orientations and relative positions.

V15297 occurs at approximately the same horizon as V15298 at the bottom of the block. The specimen is oriented lying partially on its right side and partially on its back, relative to the horizontal. It consists of an articulated partial skull, and presumably some associated cervicals, fragmentary and disarticulated anterior limb elements, and well articulated thoracic vertebrae, hips, hindlimbs and tail. The preserved skeletal association of the anterior portion of the specimen was disrupted during collection of the fieldblock. As viewed from the bottom of the block, the right hind limb of V15297 is tightly flexed and a patch of gastroliths is present just anterior to the fused pubes.

V15298 occupies the lowest portion of the block at about the same level or slightly lower than V15297. It consists of a complete, but partially articulated right pes slightly inclined by lying for the most part on its lateral surface. Some of its phalanges are separated by a few centimeters.

V15299 lies predominantly on its right side and consists of articulated hind quarters (pelvic girdle, hind limbs, and tail) of an individual similar in size to V15297. The upper right hind limb of V15299 is tightly flexed, but the tarsus and pes are partially disarticulated. The left hind limb is well articulated and moderately flexed. We are uncertain if gastroliths are present.

V15300 consists of an articulated series of stiffened distal caudals at about the same level as V15299.

V15301 consists of a nearly complete, very small (presumably juvenile) skeleton. It is exquisitely preserved and largely articulated, although some elements of the skull, arms and toes are separated by a few cm. It does not show tightly flexed hind limbs, but does exhibit flexion in its tail and neck. Both tarsi are bent backwards 50 degrees from the long axis of the tibia/fibula.

#### TBB2002

TBB2002 yields five small theropods in superposition through approximate 65 cm of section. The uppermost two (V14531 and V14532) are the holotype and paratype, respectively of *Guanlong wucaii*. The lower two (V15303 and V15304) are assignable to *Limusaurus inextricabilis*. V15302 is an undescribed taxon that is not identifiable as any known Shishugou theropod. This site has suffered much less from erosion and breakage

during collection than the TBB2001, and many of the elements that are not visible may lie within the remaining sediment.

V14531 and V14532 (*Guanlong wucaii*) lie on their left sides in superposition, with V14531 overlying V14532, but separated from it by up to 10 cm of matrix. The hind limbs are tightly flexed in both specimens. In V14531 the skull is articulated and teeth are in place, however, most of the exposed right side of the specimen is disarticulated and some elements have drifted apart. V14532 is largely articulated but exhibits some drifting of fingers and toes. The skull and first six cervicals form a continuous skeletal series that is dislocated 90° from the posterior cervical series and twisted 180° around the axis of the vertebrae.

V15302 occurs up to 10 cm below V14532, and consists of an articulated partial postcranial skeleton lying on its left side. It includes cervical, dorsal, and caudal vertebrae, both pelves and partial hindlimbs. A series of six anterior trunk vertebrae are sharply dislocated from those that follow and extend upward for 14 cm along the edge of the block. The mid to distal-most caudal series is also dislocated, and oriented vertically. It can be traced upwards to the surface of the block where the tip is dislocated and twisted into the horizontal plane occupied by V14531.

V15303 (*L. inextricabilis*) occurs as much as 10 cm below V15302, lies on its ventral side, and consists of the pelves, trunk through anterior caudal vertebrae, a right femur, a complete left hind limb, and partial forelimbs. The specimen is fully articulated. The left hind limb is tightly flexed and the right femur is articulated with the ilium and flexed. At a position 20 cm anterior to the front edge of the ilium, the posterior trunk

vertebrae are sharply dislocated and twisted to the right, continuing back toward the pelvis.

V15304 (*L. inextricabilis*) lies on its left side at the bottom of the block, as much as 10 cm below V15303. It is largely articulated and consists of cervicals, an associated right forelimb, pelvis, a patch of gastroliths, left and right hind limbs, and anterior caudals. The upper portion of the left hind limb is tightly flexed but the metatarsus is only lightly flexed. A few phalanges have drifted apart. The right leg shows little flexion but is completely articulated. A few drifted cervical vertebrae are present.

#### TBB2005

Due to ongoing preparation, paleontological data from TBB2005 are incomplete. The block yields nine small theropods (all the ceratosaur, *Limosaurus extricabilis*) as well as nine other small vertebrates. The specimens occur through approximately 90 cm of section. Skeletons are often in superposition, but here are assigned to one of three positions in the block: upper, middle, and lower. Three *L. inextricabilis* occur near the base of the block. One is a nearly complete adult skeleton that is missing some distal caudal vertebrae (holotype, V15923). Another is apparently missing the anterior part of skeleton. A few centimeters above the lowest layer there is a headless adult skeleton with a complete tail, which is split in two through the pelvis. The lower part of the block also yields a small crocodyliform skeleton next to V15923, the jaws and arm of a small tritylodont, a mammal jaw, and a patch of crocodyliform bones.

In the middle of the block there are four *L. inextricabilis*: an adult skeleton without a skull, an adult ilium, a small skeleton with a skull, and a small skull, which is

poorly preserved and may include a skeleton. The middle of the block also yields a mammal skeleton with skull.

At the top of the block there is an adult ceratosaur represented by a partial skeleton, and the tail of a small ornithischian. There are also some specimens that were removed from the block during collection and preparation. These include a small *L. inextricabilis* skeleton with skull, a partial turtle shell, and two tritylodonts with skulls and partial skeletons.