

Once again outlining phylogenetic force.

Basal Tetanurae but not Orionides...

- Cryolophosaurus ellioti
- "D. lophosaurus" sinensis / Sinosaurus sinensis / Sinosaurus triassicus
- Shuangbaisaurus antonybaensis
- Monoblophosaurus jiangi
- Clavonyx coelurus primitus (may be sister group to Tetanurae)

Orionides / Carnosauria... etc...

~~Allosauridae~~ / Spinosauridae

- Piatnitzkysauridae
 - Marskoosaurus bicentisimus
 - Condroptera Cornuilli
 - Piatnitzkysaurus floresi
- Megalosauria incerta sedis
 - Streptospondylus altordensis

Spinosauridae

- Baryonyx walkeri
- Suchomimus feneerensis
- Irritator clelleryi
- Ichthyovenator laosensis
- Spinosaurus aegypticus
- various others, need mention.

- No! Drawing!
- Oxalaca quilombensis
 - Angulomammia
 - Cristatusaurus lapparenti
 - Siumosaurus suteethorni
 - Curmillasaurus cingedae
 - "Sinopliosaurus" fusuensis
 - Vallibona venatrix
 - Sigilmassasaurus brevicollis (see new paper)

Megalosauridae

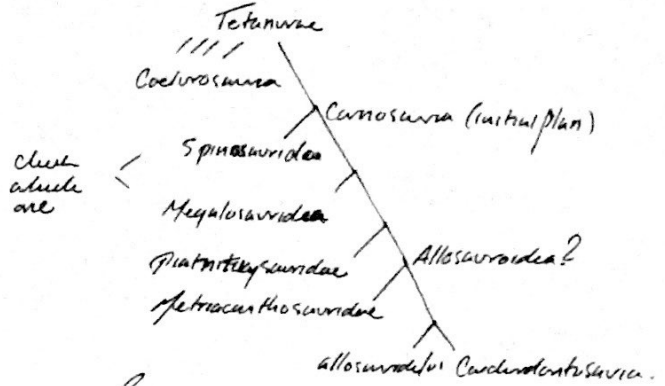
- Eustreptospondylus oxoniensis
- "Afrovenatorinae"
 - Afrovenator abukensis
 - Dubreuillosaurus valedunensis
 - Dretausaurus divensis
 - Maynosaurus nethercombensis
 - Leshanosaurus granensis
 - Doeklopiou hucklandii

Megalosaurinae

- Duravenator hespersis
- Megalosaurus hucklandii
- Torvosaurus tanneri
- Wuerkhovvenator albat

from Notes

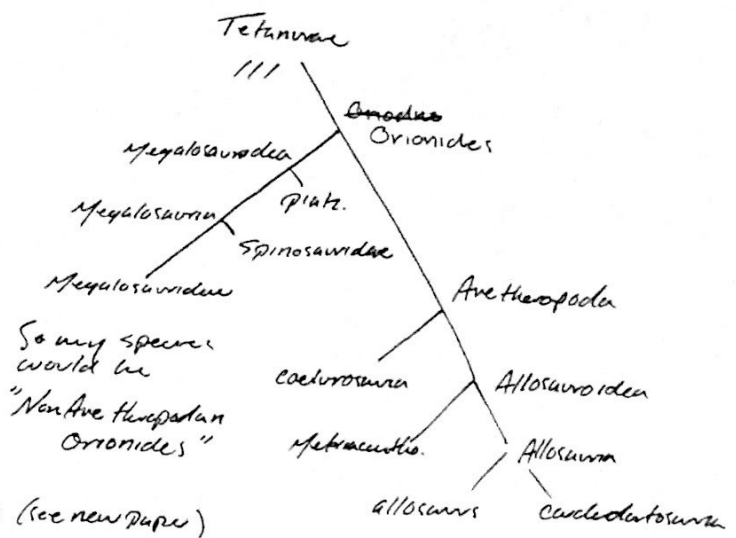
Rebut 2019



So my species are

"Non Allosauridae Carnosaurs"

Carrano Denson



So my species would be "Non Ave. Theropodan Orionides"

No matter what, its odd class, locations. the groups I chose are no longer clades — which was my whole initial intent on how I chose. It would have been easier if I got to the allosauridae, then I could have simply said "Non Coelurosaurian" Tetanurae. Lesson learned, I suppose.

But, as a result, I won't start with the more basal species, in case it turns out I cannot include them the way I initially wanted.

Starting w/ Spinosauridae studies, as, in some ways, much is known, although controversial.
I wouldn't call myself an anatomical specialist in the slightest, so we shall see how this goes.

Some basic notes from Goldfingers Animal Anatomy for Artists

pass through (center of its mass)

Each section or structure of a part of a body can be described by its
- axis - or the line, through the center following the longest dimension
- extent - generally follows bones. Keep in mind body volumes, and how these may change w/ position. Mucous stalks and thin, esp. limb volume is mostly muscle and bone - skull & chest-bone.
Proportions may be best measured from these bony landmarks

- anterior - towards front
- posterior - towards rear
- Cranial - towards head
- Caudal - towards tail
- Dorsal - towards back, upper side, above
- Ventral - towards ground, belly, below
- Superior - above
- Inferior - below
- Medial - towards midline, away from outside of body
- Lateral - away from midline, towards outside of body
- Internal - deep, away from surface
- External - towards surface
- Proximal - towards center of body, "near"
- Distal - away from center of body, "distant"
- Deep - away from surface, or covered
- Superficial - surface level
- Subcutaneous - just below skin, related esp. to bony landmarks.

general skeleton

bones act as levers; motion & protection
bone-bone = ligaments, joints, articular cartilage
spine - projecting or raised ridge.
process - projection of varying shape
protuberance - projection / bump
(a) tuberosity - enlargement
crest - high ridge
long bone
- shaft, expansion at each end
- expansion = head
prominences at the end of bones - condyles
non-articulating prominences at the ends - epicondyles
Bony Landmarks - prominent subcutaneous pts, IMPORTANT PROPORTIONAL TOOLS; KEY FOR UNDERSTANDING ARTICULATION!
Can appear as depressions amidst muscles, projectors against thin ind.

Bones are key to volume, axes, and planes (orientation keys)
that make up organisms.
axial skeleton - skull, rib cage, spine
limb skeleton - limbs + girdles

skull

may be covered by temple (chew muscles) (temporalis)
cranium / braincase, face, jaw.
lips, nostrils, chewing muscles (2 each side) some covered animal skin then few spots, some cranial corn branched completely.
Base of skull - occipital ridge... very developed Temporalis muscles some midline ridge over braincase. (chisel for!)
major muscle attachments...
Other subcutaneous markers - orbits, zygomatic arches, snout ridge... usually in continuous (niche or group?) zygomatic arches project outward.
mandibles/lower jaw - hinges at back end of skull... just in front of ear hole... Note jaw convergence + curvature...

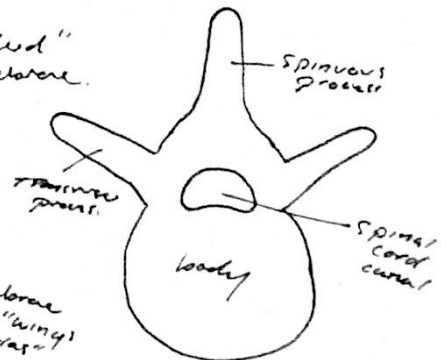
Teeth + Horns

Horns generally are bony cone + inky horn by sheath.

Vertebral Column...

most flexible @ neck (cervical vertebrae)... less flexible thoracic @ lumbar vert. to low ribs & pelvis (rib cage has dorsal vert.) Sacrum, lower lumbar and tail, is rigid fused vert. Tail ext. flex. made of (coccygeal or caudal vert.). generally (more general) - drum shape w/ 3 projections... other projections allow articulation... elastic in front to head of ribs/bone. up - spinous sides - transverse.

"standard" vertebrate.



general notes + anatomy

vertebral column

at 2 cervical vert. are unique.

1st - atlas, shortest. allows only for flexion and extension of skull...

permits up + down movement w/ change in vert. h. neck. wings nearly width of skull

2nd - axis generally longest vertebrae, permitting only side to side motion.

Transverse - general. long. spinous pro. tips can be subcutaneous/subdermal.

(always??) Spinous process of the 4th vert is where nuchal ligament of neck attaches... where outline of back of neck meets thorax is important to note in all animals... important to note extent beyond shoulder blade...

lumbar vertebrae - well developed transverse processes... Tail vertebrae typically not seen.

Ribs

sternum may be subcutaneous @ midline...

projection at neck of sternum, xiphoid process, is not visible...

Front is called manubrium... 1st pair art....

"point of chest", where front profile meets chest (of neck) depression above called "pit of the neck"

Shoulder (mostly, in this book, pertains to mammals)

scapula/blade - side of cage. upper end leans to spine...

Spine along + axes, tubercle bony expansion near cerv....

lower end to acromion...

Arm of shoulder (even to spell!)

humerus - upper end, head. articulates w/ scapula...

point of outside front corner of upper arm may be seen - called point of shoulder.

Radius - weight bearing bone in 4 legged animals... expands @ wrist, straight down forearm

downward from elbow... can cross diagonally. radius usually is what only reaches wrist

ulna - upper end to elbow... "olecranon" - main prominence of bent arm.

Triceps muscles in some cases can overlie and conceal this... (in canis por)

Some animals feature a fused ulna to radius as it tapers...

Pair of forearm bones control pronation and supination. Dogs, etc, locked in pronation... palm always down.

Forefoot/hands

carpals, metacarpals, digits.

Carpus - 2 horizontal rows of cube-like bones...

Accessory carpal bone projects backwards from wrists. Strong ligament to metacarpals.

metacarpals - body of hand (palm/hoof). 1-5, sturdy w/ medial/inner thumb.

Reduced metacarpals taper at lower end, head at top... "splint" bones... 2-5 have 3 phalanges. Art w/ meta, middle, + distal w/ hoof/nail/claw.

1 - 1 phalange, prox + distal. Usually reduced, no art.

Pelvis

2 hip bones (haunch) on either side.

attached at midline below, sacrum above.

ilium, ischium, pubis, bones. five.

meet and form socket called acetabulum...

NOTE III NOTE TILT by curving out front pt w/ ischiatic tuberosity.

Sacral tuberosity... end of crest above.

articular point, coxal tuberosity, called "point of hip"

ischium expands backwards into ischiatic tuberosity.

"angle of the buttocks." Rear thigh muscles

originate from lower edge, lean of upper exposed... (Bumbers, 1 thumb, there is one on each side!)

Pubis, medial to hip socket...

abdominal muscles (neck, abdomen) attach at its front edge.

Thigh

femur is heavy + thick. shaft to neck to head.

at base of top end to greater trochanter,

can form a prominence... (hip dips)

lower end expands into spool like acetabulum

in front and 2 large condyles on back.

condyles, projecting backwards.

articulate w/ tibia.

Lower Leg

tibia + fibula. Tibia is large, long + heavy.

inner surface is subcutaneous. Bony

prominence @ upper head to lateral tuberosity.

fibula upper end is imp. condyle and

DOESNT ART. w/ KNEE JOINT! Fibula may

merge into or taper

Hoof/foot

phalanges, metatarsals, digits

phalanges - least part receives achilles tendon

of gastrocnemius and soleus muscles.

Joint
moves in twisting