

Article XXX.—FOSSIL SAW-FLIES FROM FLORISSANT,
COLORADO.

By T. D. A. COCKERELL.

Dineura saxorum sp. nov.

Length about 7 mm.; width of abdomen 2 mm.; anterior wing about $6\frac{1}{2}$ mm.; wings hyaline, nervures fuscous; the head and thorax were apparently black; abdomen brown, with light bands on the first five segments, those on the second, third, and fourth more or less interrupted in the middle; the apical segments appear to have lateral spots.

The venation agrees well with *Dineura* (cf. Macgillivray, Pr. U. S. Nat. Mus., XXIX, pl. xxxiii, fig. 63), but unfortunately, although the wings are for the most part well preserved, the basal region is obscure, so that it is impossible to be absolutely sure about the form of the lanceolate cell. After very close scrutiny, however, I believe it is certainly petiolate, as in *Dineura*, not contracted in the middle and double as in *Hemichroa*. The venation agrees with Macgillivray's figure of *Dineura geeri*, differing only in slight details, as follows:

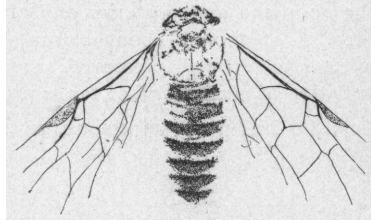


Fig. 1. *Dineura saxorum* sp. nov.

Anterior wing. — (1) Transverse costal nervure (Sc_1) a considerable distance basad of the insertion of the basal nervure, about as in *Pteronus*; (2) transversomedial nervure attached decidedly nearer base than apex of first discoidal cell, a character approached by *Pseudodineura*; (3) first discoidal cell longer, its base being more produced; (4) upper edge of second discoidal cell longer, as must follow from the shifting of the transversomedial nervure.

Hind wing. — (5) Nervure M_2 inserted a short distance basad of origin of R_4 . (This character exists, much exaggerated, in *Hemichroa*.)

The following measurements are in μ :

Breadth of marginal cell	600.
Length of first submarginal cell	360.
" " second " " on marginal	930.
" " third " " " "	750.
Insertion of second recurrent nervure from end of second sub- marginal cell	135.
Insertion of basal nervure from base of first submarginal	600.
Transverse costal nervure from insertion of basal nervure	300.

Insertion of first recurrent nervure from lower apical corner of first submarginal cell	270.
Insertion of first recurrent nervure from insertion of second recurrent nervure	930.
Origin of basal nervure from (basad of) transversomedial	600.
Lower end of transversomarginal nervure from insertion of second transversocubital	150.
Insertion of transversomarginal from apex of stigma (along margin of latter)	165.

Hab. — Tertiary shales of Florissant, Colorado, at Station 13 (some $\frac{3}{4}$ mile S. W. of Florissant, on hill sloping south); collected July, 1906, by Dr. W. M. Wheeler. Type in Amer. Mus. Nat. Hist.

***Eriocampa wheeleri* sp. nov.**

Head black; thorax and abdomen brown; apparently the extreme base of the abdomen and posterior end of thorax black; wings clear, nervures brown; breadth of thorax about 2 mm.; length of anterior wing about $6\frac{1}{2}$ mm.; lanceolate cell well preserved, quite normal; apex of costal nervure thickened; venation of hind wings, so far as preserved, apparently normal.

The anterior wings agree well in most respects with *Eriocampa*

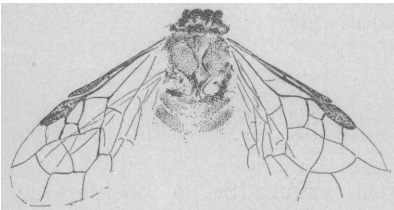


Fig. 2. *Eriocampa wheeleri* sp. nov.

ovata, as figured by Macgillivray. The differences are as follows: (1) Basal nervure inserted at *basal corner of first submarginal cell*; (2) basal side of first discoidal cell (*i.e.*, basal nervure) conspicuously longer than the oblique apical side, but the difference is not nearly so great as in *Eriocampoides*; (3) trans-

verse marginal nervure much less oblique; (4) externomedial nervure straight except quite at its base, where it bends abruptly to join the subcostal.

The following measurements are in μ :

Length of first submarginal cell	450.
“ “ second “ “ on marginal	450.
“ “ third “ “ “ “	750.
Insertion of second transverse cubital to lower end of transverse marginal	450.
Length of basal nervure	750.
Basal nervure basad of transversomedial	300.
Upper insertion of transversomedial to origin of first recurrent nervure	555.
Insertion of first recurrent nervure from base of second submarginal cell	195.
Breadth of oblique apex of first discoidal cell	495.

Hab. — Tertiary shales of Florissant, Colorado, at Station 14 (some 3/4 mile S. W. of Florissant, on hill facing north). Collected July, 1906, by Dr. W. M. Wheeler. Type in Amer. Mus. Nat. Hist.

Hemichroa eophila sp. nov.

Length about 10 mm.; of anterior wing about 9 mm.; breadth of thorax about 2 1/2 mm.; of abdomen 2 3/4 mm. Head and thorax black; abdomen a warm sepia brown, blackish on first two segments, and with dusky entire bands on the three following; wings hyaline, nervures brown.

This is a perfectly typical Hemichroa, excellently preserved. It differs as follows from Macgillivray's figure of H. americana (Pr. U. S. Nat. Mus., XXIX, pl. xxxiii, fig. 62):

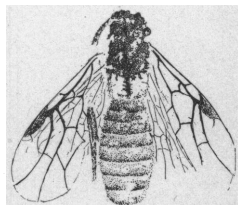


Fig. 3. Hemichroa eophila sp. nov.

- (1) Transverse costal nervure a little more basad of basal nervure. (2) Third submarginal cell somewhat longer in proportion to its height. (3) Transversomedial inserted well before middle of first discoidal cell.

The transverse marginal nervure arises from stigma about 180 μ from its end and is curved, passing obliquely down to reach the lower border of marginal cell about 180 μ beyond insertion of second transversocubital. The lanceolate cell is well preserved, and formed as in typical Hemichroa. The venation of the hind wings is also typical and serves to distinguish the insect from Dineura. Except for the lanceolate cell, there is a good deal of resemblance to Pseudodineura; the wings show the following differences from Pseudodineura hepaticæ, as figured by Macgillivray (Pr. U. S. Nat. Mus., XXIX, pl. xxxiv, fig. 65):

- (1) Stigma and marginal cell conspicuously longer; (2) transverse costal nervure more basad of basal nervure; (3) first discoidal cell narrower above; (4) third submarginal cell longer.

The following measurements are in μ:

Length of first submarginal cell	405.
“ “ second “ “ on marginal	1200.
“ “ third “ “ “ “	750.
Upper margin (on subcostal nervure) of first discoidal cell, about	450.
Transverse costal nervure basad of insertion of basal nervure . .	180.
Origin of basal nervure from transversomedial	600.
Breadth of marginal cell	900.
Length “ “ “	3300.
Insertion of first recurrent nervure from insertion of second .	900.

Hab.—Florissant, Colorado, in tertiary shales at Station 14. Collected July, 1906, by Mr. S. A. Rohwer. Type in Am. Mus. Nat. Hist.

INDEX TO VOLUME XXII.

[New names of genera, species, and subspecies are printed in heavy-faced type; also the main reference in a series of references.]

- Acanthopelma maculata**, 185.
Accenites defunctus, 493.
 luridus, 494.
Admetus whitei, 188.
Adocus, 30, 159.
Aello megalophylla senicula, 261.
Agapostemon, sp., 419, 420.
 coloradensis, 427.
 texanus, 419, 427.
Agomphus, 30, 159.
Aimophila ruficeps scottii, 173.
Alcidamea, 420, 445.
 simplex, 445.
Alcimosphehus licinus, 185.
 Allen, J. A., mammals from the States of Sinaloa and Jalisco, Mexico, collected by J. H. Batty during 1904 and 1905, 191-262; mammals from the Island of Hainan, China, 463-490.
Allosaurus, 283-295.
Amberleya capatanaca, 133.
Amblytropidia (?), 115.
Ammonites cordiformis, 133, 401.
 ishmæ, 131.
 ishmæ var. *arcticus*, 131, 132.
 schefkini, 131.
 (*Amaltheus*) *cordiformis*, 401.
 (*Cadoceras*) *arcticus*, 133, 134.
 (*Cadoceras*) *ishmæ* var. *arcticus*, 133, 134.
 (*Macrocephalites*) *ishmæ* var. *arcticus*, 134.
 (*Macrocephalites*) *macrocephalus*, 131, 134.
 (*Egoceras*) **subtumidum**, 400.
Amphiacusta annulipes, 118.
 bahamensis, 118.
Amphicyon, 381.
Amphispiza bilineata grisea, 173.
Anahita, sp., 188.
Anchitherium, 385, 388.
 ultimum, 385.
Andrena, 419.
 atala, 430.
 birtwelli, 430.
 claytoniæ, 431.
 colletina, 454.
 cratægi, 431.
 cyanophila, 431, 432.
 danningi, 434.
 fragiliformis, 430, 435.
 hirticincta, 434.
 Andrena, ***lappulæ***, 437.
 lewisii, 430, 435.
 medionitens, 430.
 mentzelii, 434, 455.
 micranthophila, 430, 432.
 multiplicata, 432.
 prunorum gillettei, 430.
 ribesina, 430, 433, 434.
 runcinatae, 430, 434.
 semipunctata, 432.
 sieverti, 430, 436.
 sp., 437.
 striatifrons, 432.
 synthyridis, 430, 436.
 topazana, 430, 434.
 vicina argentinæ, 430, 432.
Andronicus, 445.
Anergates, 35.
 atratus, 95.
Anisolabis annulipes, 109.
 azteca, 109.
Anomosaurus, 25.
Anosteira, 158-160.
 anglica, 159.
 ornata, 157.
Antedon, 123, 125.
 discoidea, 125, 126.
Anthidium, 420.
 emarginatum, 444.
 maculosum, 445.
Anthophora bomboidea, 419.
 neomexicana, 419, 443.
 simillima, 443.
 (*Micranthophora*) *flexipes*, 443.
Anthracotherium, 365, 381.
Anthus pensilvanicus, 180.
Antrostomus vociferus macromystax, 167.
 Ants, habits of the tent-building, 11-18; founding of colonies of, by queen, 33-105; of Japan, 301-328; of the Grand Cañon, 329-345; of the Bermudas, 347-352
 maladjustments in the relations of, to plants, 403-418.
Anyphaena velox, 186.
Aonyx leptonyx, 480.
Aphænogaster aciculata, 315.
 famelica, 303.
 texana, 332.
Aphelocoma grisea, 169.
 sieberii wollweberi, 170.
Aphelops, 381.

- Aphlebia, 113.
 inuitata, 113.
 Apis mellifera ligustica, 454.
 Arachnida, Bahaman, 185-189.
 Arca, 133.
Archæohippus, 385-388.
 ultimus, 385, 387.
 Arctocynidæ, 357.
 Arsinoitherium, 363.
 Ashmeadiella, 420, 445, 446.
 Asio wilsonianus, 164.
 Aspideretes, 156.
 gangeticus, 156.
 Astarte **dacotensis**, 394.
 inornata, 396.
 Astragalinus psaltria hesperophilus,
 175.
 Astroceras pergamena, 127.
 Asturina plagiata, 163.
 Atherurus **hainanus**, 464, 470-472.
 Atta, sp., 41, 43-45.
 sexdens, 42, 46, 91, 95.
 Attii, 35.
 Auriparus flaviceps flaviceps, 182.
 Azteca, 13.

BAËNA, 155, 156.
 arenosa, 155.
 pulchra, 156, 157.
 undata, 155, 156.
 Bæolophus wollweberi annexus, 182.
 Bahamas, Orthoptera of, 107-118;
 Arachnida from, 185-189.
 Balantiopteryx plicata, 235.
 Banks, Nathan, Arachnida from the
 Bahamas, 185-189.
 Baptemys, 157.
 wyomingensis, 30.
 Barytherium, 363.
 Basilemys, 30.
 Bassariscus astutus astutus, 253.
 Batagur, 28.
 Bees of Florissant, Colorado, 419-
 455.
 Belemnites beyrichi, 134.
 densus, 133, 134, 399.
 obtusus, 399.
 panderi, 133, 134.
 subextensus, 134.
 Bethyldæ, sp., 497.
 Black Hills of Dakota, Jurassic fos-
 sils of the, 389-402.
 Blatta adspersicollis, 110.
 dilatata, 110.
 pavida, 110.
 vitrea, 110.
 zapoteca, 110.
 (Phyllodromia) delicatula, 109.
 Blattella adspersicollis, 110.
 azteca, 110.
 punctulata, 110.

 Bombus, 420.
 appositus, 453.
 dorsalis, 453.
 dubius, 453.
 edwardsii, 453.
 huntii, 419, 453.
 iris phaceliæ, 454.
 juxtus, 453.
 morrisoni, 453.
 nevadensis, 453.
 rufocinctus, 454.
 rufosuffusus, 453.
 ternarius, 419.
 Boremys, 157.
 Bothriomyrmex meridionalis, 104.
 Brachymyrmex heeri, 11, 17, 350.
 heeri var. obscurior, 350.
 Brachyponera solitaria, 302.
 Bridger beds of Wyoming, volcanic
 ash in, 273-280.
 Brown, Barnum, new notes on the
 osteology of *Triceratops*, 297-
 300.
 Brues, Charles T., fossil parasitic and
 phytophagous Hymenoptera
 from Florissant, Colorado, 491-
 501.
 Bulimus teres, 459.
 Buteo borealis calurus, 164.
 swainsoni, 163.
 Butorides virescens anthonyi, 162.

CADOCERAS arcticus, 132.
 Calamospiza melanocorys, 172.
 Callagur, 28.
 Calliopsis, 420.
 coloradensis, 440.
 rhodophilus, 440.
 Callipepla squamata squamata, 162.
 Calocitta colliei, 170.
 Calothorax lucifer, 167.
 Camponotus, 13, 39.
 brunni, 303.
 ferrugineus, 39.
 herculeanus, 301, 302.
 herculeanus aterrimus, 325.
 herculeanus japonicus, 324.
 herculeanus ligniperdus, 325.
 herculeanus ligniperdus var. ob-
 scuripes, 325.
 herculeanus pennsylvanicus, 324.
 herculeanus punctatissimus, 325.
 herculeanus var. sachalinensis,
 325.
 herculeanus vagus, 325.
 landolti, 327.
 maculatus maccooki, 332, 345.
 maculatus vicinus var. nitidi-
 ventris, 332, 345.
 marginatus, 302.
 marginatus brunni, 327.

- Camponotus marginatus* quadrinotatus, 326.
marginatus vitiosus, 303, 325.
novæboracensis, 39.
obscuripes, 303.
pennsylvanicus, 39, 104.
pennsylvanicus var. *japonicus*, 301.
quadrimaculatus, 327.
ruficeps, 327.
truncatus, 327.
(Colobopsis) *rothneyi*, 302, 327.
(Colobopsis) *rothneyi* krafti, 327
Camptonectes, 133.
Canis impavidus, 224.
vigilis, 223, 253.
Cardiocondyla emeryi, 349.
Carpodacus mexicanus *rhodocolpus*, 175.
Case, E. C., on the skull of *Edaphosaurus pogonias* Cope, 19-26.
Catherpes mexicanus, 181.
mexicanus albifrons, 181.
mexicanus conspersus, 181.
mexicanus polioptilus, 181.
Centurus vittatus, 188.
Centurus aurifrons, 165.
Ceratina, 420.
neomexicana, 444.
Ceratinoptera diaphana, 110.
Cerchneis sparveria phalcena, 163.
Certhia familiaris albescens, 182.
Cervulus muntjac, 468.
reevesi, 468.
vaginalis, 468, 490.
Cervus eldi, 468.
equinus, 467.
hippelaphus, 467.
unicolor equinus, 467.
Ceryle alcyon, 164.
americana septentrionalis, 164.
Chelostoma, 445.
Chelydra crassa, 30.
Chelynia, 420.
elegans, 445.
monticola, 445.
Chilonycteris mexicana, 261.
Chironomus, sp., 416.
Chisternon, 155-157.
hebraicum, 155, 156.
undatum, 156.
Choronycteris mexicana, 261.
Chondestes grammacus strigatus, 175.
Chonocephalus dorsalis, 267.
Chordeiles acutipennis texensis, 166.
Chortophaga cubensis, 108, 115.
Cidaris bellefourchensis, 391.
Citellus (Otospermophilus) *variegatus* *couchi*, 245.
(Otospermophilus) *variegatus* *rupestris*, 245.
Citellus (Otospermophilus) *variegatus* *variegatus*, 244.
(Xerospermophilus) *mexicana* *mexicana*, 245.
Clausilia occidentalis, 459.
teres, 459.
Clisodon terminalis, 443.
Cockerell, T. D. A., the bees of Florissant, Colorado, 419-455; a fossil *Cicada* from Florissant, Colorado, 457, 458; the fossil Mollusca of Florissant, Colorado, 459-464; fossil saw-flies from Florissant, Colorado, 499-501.
Coeligena clemenciae, 167.
Coelioxys, 420.
Colaptes cafer collaris, 165.
Colletes, 420, 455.
ciliata, 425.
florissantia, 425.
gaudialis, 425.
kincaidii, 424.
nigrifrons, 424.
oromontis, 424, 425.
parvulus, 455.
phaceliæ, 424.
polemonii, 425.
salicicola geranii, 424.
sieverti, 424.
skinneri, 425.
Columba fasciata fasciata, 163.
Columna haydeniana, 459.
teres, 459.
Commoptera, 267.
Comptonectes bellistriata, 397.
Condylarthra, 358.
Conepatus mesoleucus mearnsi, 259.
sonoriensis, 225, 258.
Conocephalus nieti, 116.
Corvus corax sinuatus, 170.
Coryphodon, 361.
Coturniculus savannarum bimaculatus, 175.
Cremastogaster, 13, 39, 415, 416.
artifex, 14.
ashmeadi, 2.
ebeninus, 13.
inconspicua, 14.
kirbyi, 13.
laboriosa, 303, 312.
laboriosa var. *matsumurai*, 312, 328.
lineolata, 1-18, 332, 336, 413.
lineolata pilosa, 6, 7, 413, 418.
margaritæ, 14.
minuta, 2.
montezumia, 14.
osakensis, 303.
ranavalonæ, 14.
rogenhoferi, 13.
sordidula, 302.

- Cremastogaster sordidula* var. *osakensis*, 312.
stadelmanni var. *intermedia*, 14.
stolli, 14, 17.
sulcata var. *ramulinida*, 14.
tricolor, 14.
Crocidura murina, 481.
(Pachyur) *murina*, 481.
Ctenus, sp., 188.
Culex, 416.
Cyanocitta stelleri diademata, 169.
Cycloptilum americanum, 118.
Cynodictis, 381.
Cyrtonyx montezumæ mearnsi, 162.
Cyrtoxipha, sp., 118.

DASYPTERUS *xanthinus*, 235.
Dendroica æstiva dugesi, 180.
æstiva sonorana, 180.
auduboni auduboni, 180.
auduboni nigrifrons, 180.
Dermanura phæotis, 237.
tolteca, 261.
Dermatemys, 158, 159.
Desmodus rotundus, 262.
Dianthidium, 420.
ressonii, 445.
Didelphis, 194.
mesamericana mesamericana, 195.
mesamericana tabasensis, 195.
Didelphys, 381.
Didolodus, 358.
Dimetrodon, 22, 23.
Dineura saxorum, 499.
Diplocentrus lesueurii, 188.
Dipoëna crassiventris, 187.
Dipoides, 381.
Dolichoderus, 13.
marie, 415.
plagiatus pustulatus var. *inornatus*, 415.
Dorymyrmex pyramicus, 332, 333, 342, 343.
pyramicus var. *bicolor*, 335, 342.
Dryobates arizonæ arizonæ, 166.
scalaris bairdi, 166.
villosus hyloscopus, 166.
Dynamosaurus, 281, 296.
imperiosus, 281, 282.

Echmatemys, 27.
septaria, 28.
Ecitomyia, 267.
wheeleri, 267, 269.
Eciton schmitti, 95.
Ectoconus, 358.
Ectomomyrmex japonica, 302.
Edaphosaurus, 19-25
pogonias, 19-26.
Edmondia, sp., 133.

Elotherium, 365, 381.
Emporphopsis, 420.
mucida, 419, 443.
Empidonax canescens, 167.
fulvifrons pygmæus, 168.
pulverius, 168.
trailli trailli, 167.
wrightii, 167.
Emys, 27.
cibollensis, 29.
lativertebralis, 29.
orbicularis, 27.
septaria, 27.
Epeira labyrinthea, 187.
wittfeldæ, 187.
Epeolus beulahensis, 442.
Epilampra blattoides, 110.
Equus caballus, 149.
Erginus castaneus, 189.
Eriocampa wheeleri, 500.
Eugenes fulgens, 167.
Eumicrotis curta, 133.
Euphagus cyanocephalus, 170.
Euponera (Brachyponera) solitaria, 302, 306, 328.
Euprotogonia, 358.
Eurycotis, 110.
bahamensis, 110.
Eutamais, 475.
Exyra ridingsii, 415.
rolandiana, 415.
semicrocea, 415.

FELIS *brasiliensis*, 220.
cacomitli, 222.
centralis, 216.
chinensis, 477.
glauca, 253.
hernandezii, 214, 216, 218.
hernandezii goldmani, 216.
limitis, 220.
macrocelis, 464, 478.
onca, 216-218.
onca goldmani, 215.
oregonensis aztecus, 221, 253.
pardalis, 220, 221.
pardalis albescens, 219-221.
ricketti, 478.
scripta, 478.
Filistata hibernalis, 185.
Formica, 3, 39, 97.
ciliata, 47, 92.
cinerea var. *neocinerea*, 47, 412.
consocians, 33, 41.
dakotensis, 47, 92.
dakotensis wasmanni, 47, 92.
difficilis, 47, 58, 63, 64.
difficilis var. *consocians*, 47, 50-58, 60-67, 70-73, 86, 89-92, 95-97, 99-102, 104, 105.
dryas, 47, 64.

- Formica dryas* var. *gymnomma*, 47.
exsectoides, 46, 51, 71-73, 92, 93, 101, 105, 403, 404, 406, 409, 410, 418.
exsectoides var. *opaciventris*, 47, 71, 405, 410.
exserta, 47-49, 89-90, 94, 98, 102, 409, 410.
fusca, 46, 47, 64, 91, 92, 94, 97, 98, 101, 302, 344.
fusca var. *argentata*, 46, 68, 332, 344.
fusca var. *gnava*, 46, 93, 332, 334, 344.
fusca var. *montana*, 47.
fusca var. *neoclara*, 47, 344.
fusca var. *neurufibarbis*, 47, 332, 344.
fusca var. *nipponensis*, 301, 323.
fusca var. *subaenescens*, 46, 104.
fusca near var. *subaenescens*, 415.
fusca var. *subpolita*, 345.
fusca var. *subsericea*, 46, 50, 51, 64, 65, 67-86, 92, 96-98, 100, 302, 323, 344, 405, 406.
fusciceps, 303.
impexa, 47, 92, 104.
lasiodes, 47.
lasiodes var. *picea*, 47.
microgyna, 47, 64, 92, 104.
microgyna rasilis, 47.
moki, 332, 343, 344.
montigena, 47, 64, 92.
munda, 47.
nepticula, 33, 47, 53, 64-67, 92.
nevadensis, 47, 64, 92.
nigra, 352.
nipponensis, 301, 303.
oreas, 47, 92.
pallide-fulva, 47, 48, 64, 91, 92, 94, 344.
pallide-fulva subsp. *schaufussi*, 47, 48, 50, 51, 53, 64, 86-89, 98.
pallide-fulva subsp. *schaufussi*, var. *incerta*, 47, 50, 51, 53-62, 64, 65, 70, 89, 90, 105.
pallide-fulva subsp. *schaufussi* var. *meridionalis*, 47.
pallide-fulva subsp. *schaufussi* var. *nitidiventris*, 47, 52, 62.
pallide-fulva subsp. *schaufussi* var. *succinea*, 47.
pergandei, 47, 48, 85.
pilicornis, 47.
pratensis, 405, 409.
rufa, 11, 33, 46-50, 63, 64, 67-69, 72, 89, 90, 92-94, 98, 302, 344, 404, 405, 409, 412.
- Formica rufa* *integra*, 11, 12, 18, 47, 53, 67-72, 80, 92, 105.
rufa *integra* var. *haemorrhoidalis*, 47, 68.
rufa *obscuripes*, 47, 68.
rufa *obscuriventris*, 47, 68.
rufa *obscuriventris* *integroides*, 47.
rufa *obscuriventris* *melanotica*, 47, 68.
rufa *obscuriventris* *rubiginosa*, 47, 68.
rufa *pratensis*, 47, 93, 323.
rufa *pressilabris*, 47.
rufa *truncicola*, 47, 92, 93, 323.
rufa *truncicola* *yessensis*, 303, 323.
rufibarbis, 47, 97, 413.
rufibarbis var. *occidentalis*, 47.
sanguinea, 33, 35, 47-49, 53, 85, 89, 98, 100, 101, 302, 322.
sanguinea subsp. *aserva*, 74, 85, 86, 89, 96, 322.
sanguinea subsp. *obtusopilosa*, 47.
sanguinea subsp. *puberula*, 47.
sanguinea subsp. *rubicunda*, 47, 74-87, 96-98, 100-102.
sanguinea subsp. *rubicunda* var. *subintegra*, 47, 73, 74, 84-86, 89, 96.
sanguinea subsp. *subnuda*, 47.
sanguinea var. *fusciceps*, 322.
subpolita, 47, 332, 344.
subpolita var. *neogagates*, 47, 51, 64-67.
subpolita var. *perpilosa*, 47.
ulkei, 47, 410.
- Fulica americana*, 162.
Funambulus pyrrhomerus, 473.
riudonensis, 464, 472.
- GASTERACANTHA* *cancriformis*, 187.
Geococcyx californianus, 164.
Geothlypis trichas *arizela*, 179.
trichas melanops, 179.
trichas occidentalis, 179.
- Gidley, J. W., a new genus of horse from the Mascall beds, with notes on a small collection of equine teeth in the University of California, 385-388.
- Gidley, J. W., and W. D. Matthew, on new or little known mammals from the Miocene of South Dakota, 135-153. See also Matthew, W. D.
- Gingko polaris*, 132.
reiniformis, 132.
sibirica, 132.
- Glossophaga mutica*, 236, 261.

- Goniobasis, 274.
 Gryllodes poeyi, 117.
 Gryllus assimilis, 117.
 bryanti, 117.
 Guiraca cærulea lazula, 172.
- HABROPODA, sp., 419.
 Halerpestes cymbalaria, 437.
 Halictoides, 420.
 harveyi, 439.
 Halictus aberrans, 427.
 aquilæ, 420.
 armaticeps, 427
 clematisellus, 429.
 cooleyi, 427.
 galpinsæ, 427.
 lerouxii, 427.
 mesillensis, 429.
 pictus, 429.
 pruiniformis, 429.
 ruidosensis, 429.
 sisymbrii, 427.
 sp., 454.
 synthyridis, 428.
 trizonatus, 427.
 veganus, 429.
 (Chloralictus) **scrophulariæ**, 428.
 (Chloralictus) sp., 429.
 (Evylæus) **synthyridis**, 427.
- Halobia, 133.
 Hardella, 28.
 Hatteria, 283, 287, 288.
 Hay, Oliver P., description of two new genera (*Echmatemys* and *Xenochelys*) and two new species (*Xenochelys formosa* and *Terapene putnami*) of fossil turtles, 27-31; on two interesting genera of Eocene turtles, *Chisternon* Leidy and *Anosteira* Leidy, 155-160.
- Helalaetes, 361.
 Heleodytes brunneicapillus obscurus, 182.
 Helicoceras, 133.
 Helictis moschata, 480.
 Helix nebrascensis, 459.
 occidentalis, 459.
 Helminthophila celata lutescens, 180.
 celata orestra, 180.
 Hemiblabea brunneri, 112.
 sp., 112.
 Hemichroa eoptila, 501.
 Hemiphrynus viridiceps, 189.
 Heriades, 420, 445.
 Herpestes griseus, 479.
 Heteroceras, 133.
 stevensoni, 133.
 Heteromys, 239, 251.
 canus, 251.
 jaliscensis, 251.
- Heteromys pictus, 211, 212, 250, 251.
 pictus **escuinapæ**, 211, 249, 250.
 pictus pictus, 249.
 pictus plantinarenensis, 211, 249-251.
- Heteropoda venatoria, 185.
 Hipparion speciosum, 152.
 Hipposideros fulvus, 484.
 larvatus, 484.
 leptophyllus, 484.
 murinus, 484.
 poutensis, 404, 483.
- Hirundo erythrogaster, 176.
 Hololampra, 113.
 Holospira leidy, 459
 Hoplitis, 445.
 Hoplochelys, 30.
 Horizopus pertinax pallidiventris, 168.
 richardsonii richardsonii, 168.
 Hovey, E. O., see Whitfield, R. P.
- Hyænodon, 361.
 Hyalina (?) occidentalis, 459.
 Hylobates hainanus, 463, 489, 490.
 pileatus, 489.
- Hypohippus, 136, 385, 386, 388.
 affinis, 135.
 equinus, 135.
- Hyrachyus, 361.
 Hyrax, 263.
 capensis, 263, 265.
 syriacus, 265.
- Hystrix hodgsoni, 471, 472.
 sp. incog., 464, 472.
 subcristatus, 471, 472.
- ICTERIA virens longicauda, 179.
 Icterus bullockii bullockii, 171.
 spurius, 172.
- Iridomyrmex analis, 332, 333, 342.
 glaber, 318.
 humilis, 348.
 itoi, 302, 303, 318.
 itoi **abbotti**, 302, 303, 318, 328.
- Ischnocolus hirsutus, 186.
 Ischnomyrmex famelicus, 315.
 Ischnoptera blattoides, 110.
 Ischnothele guyanensis, 186.
 Isectolophus sp., 275, 361.
 Isodontia philadelphica, 415.
 Isometrus maculatus, 188.
- JUNCO caniceps, 174.
 phæonotus palliatus, 174.
- Jurassic fossils from Franz Josef Land, 131-134; of the Black Hills of Dakota, 389-402.
- KACHUGA, 28.
- LABIDURA bidens, 109.

- Lachnus*, sp., 3.
Lanius ludovicianus, 178.
 ludovicianus excubitorides, 178.
Lanivireo solitarius cassinii, 179.
 solitarius plumbeus, 179.
Lasiurus borealis mexicanus, 260.
 cinereus, 260.
Lasius alienus, 10.
 americanus, 332.
 brevicornis, 41.
 brunneus, 10, 11.
 emarginatus, 10, 11.
 flavus, 302.
 flavus myops, 322.
 fuliginosus, 15, 302, 322.
 niger, 9, 10, 103, 302, 321, 342, 352.
 niger var. *alienus*, 322.
 niger var. *americanus*, 11, 105, 343.
 niger brunneus, 322.
 umbratus, 302, 322.
Lathroedectus mactans, 187.
Leda nuda, 133.
Leptonycteris nivalis, 236.
Leptothorax congruus, 303, 316.
 congruus var. *spinosior*, 317.
 emersoni, 90, 95, 412.
 neomexicanus, 332, 341.
 nitens, 332, 341.
 spinosior, 303.
 tuberum, 317.
Lepus alleni, 213, 214.
 alleni palitans, 213.
 callotis, 252.
 floridanus, 252.
 floridanus subcinctus, 252.
 hainanus, 463, 468-470, 490.
 insolitus, 212.
Leucauge argyra, 187.
Leucophæa maderæ, 112.
Liometopum, 13.
 apiculatum luctuosum, 332, 341.
 microcephalum, 91.
Liphoplus krugii, 117.
Lithocicada, 457.
 perita, 457.
Lithodomus, 398.
Lithorhynchus, 491.
 parvus, 492.
Lophiodon, 361.
Lophiotherium, 361.
Lophortyx douglasi douglasi, 162.
Lutra, 381.
 annectens, 235.
 chinensis, 479.
 cinerea, 464.
 lutra, 480.
 sp., 479.
Lymnæa scuderi, 460.
 sieverti, 461.

Lynx, 194.
 ruffus baileyi, 223.
 ruffus escuinapæ, 222.
Lyrosceles bonhotei, 185.
Lysinoe nacimientensis, 459.

MACACUS erythræus, 488.
 rhesus, 488.
 McClendon, J. F., the Myzostomes of the 'Albatross' Expedition to Japan, 119-130.
 Macrodon schonrovski, 133.
Malacomorpha, 113.
 androsensis, 114.
 Mammals, new or little known, from the Miocene of South Dakota, 135-153; from Sinaloa and Jalisco, Mexico, 191-262; from the Island of Hainan, 463-490.
Manis aurita, 466.
 dalmanni, 465, 467.
 javanica, 466.
 pentadactyla, 466.
 pusilla, 464, 465-467.
Marmosa sinaloa, 194, 239.
 Matthew, W. D., hypothetical outlines of the continents in Tertiary times, 353-383.
 Matthew, W. D., and J. W. Gidley, new or little known mammals from the Miocene of South Dakota, 135-153. See also Gidley, J. W.
Megachile, 420, 452.
 giliae, 452.
 latimanus, 452, 453.
 manifesta, 454.
 montivaga, 452, 453.
 pugnata, 452, 453.
 relativa, 454.
 vidua, 453.
 wootoni, 452.
 wootoni rohweri, 453.
Megacilissa, 419.
Megalohyrax, 263.
 eocænus, 265.
Megaquiscalus major macrourus, 170.
Megascops asio aikenii, 164.
 trichopsis, 164.
Melanerpes formicivorus formicivorus, 165.
Melissodes confusa, 443.
 hymenoxidis, 443.
 menuacha, 443.
 pallidicincta, 443.
 perplexa, 443.
Melopelia leucoptera, 163.
Melospiza lincolni lincolni, 173.
Mephitis, 193, 259.
 macroura macroura, 257.
Merula migratoria propinqua, 183.

- Merychippus*, 388.
Mesohippus, 385-388.
 bardi, 385.
Mesostenus modestus, 492.
Messor aiculatus, 303.
Metacheiromys, 361.
Metacrinus, 120.
 rotundus, 119, 121-124.
Microgaster primordialis, 496.
Microtus, 239.
 phaeus, 249.
 Miller, Waldron De Witt, list of birds collected in northwestern Mexico, by J. H. Batty, during 1903, 161-183.
Mimus polyglottos leucopterus, 181.
Miniopterus pusillus, 485.
 schreibersi, 485.
Miohippus, 386.
Modiola jurassica, 393.
 (*Volsella*) *formosa*, 393.
Modiolarca jurassica, 393.
Mogoplistes barbouri, 118.
Molossus nigricans, 236, 260.
 obscurus, 236, 260.
 pretiosus, 236.
 sinaloæ, 236.
Molothrus ater obscurus, 172.
Monomorium atomus, 311.
 destructor, 311, 348.
 floricola, 302, 310.
 intrudens, 310.
 minutum, 349.
 minutum var. *minimum*, 332, 336.
 nipponense, 302, 303, 310.
 pharaonis, 349.
 salomonis, 104.
 triviale, 302, 303, 311.
Monumetha albifrons, 446.
Multituberculata, 357-359.
Murinus cyclotis, 487.
Mus, 193.
 alexandrinus, 208, 246.
 decumanus, 472.
 musculus, 208.
 norvegicus, 464, 472.
 rattus, 246.
 sp., 472.
Mustela, 381.
Myadestes townsendi, 183.
Myiarchus cinerascens cinerascens, 168.
 lawrencei olivascens, 168.
Myotis abramus, 464, 488.
 californicus mexicanus, 260.
 davidii, 488.
 nigricans, 260.
 thysanodes, 260.
 velifer, 260.
Myrmecina graminicola, 302.
 graminicola americana var. *brevispinosa*, 332, 335.
 graminicola nipponica, 302, 303, 307.
Myrmecocystus melliger, 333, 335, 345.
Myrmica, 39, 412, 417.
 brevinodis, 95.
 fracticornis, 316.
 laevinodis, 11, 302.
 lobicornis, 302.
 rubra brevinodis, 412, 417.
 rubra laevinodis, 315.
 rubra lobicornis var. *jessensis*, 316.
 rubra scabrinodis, 11, 316, 332, 340.
 ruginodis, 38.
 schencki, 316.
Mytilus whitei, 394.
Myzostoma ambiguum, 123.
 antennatum, 123, 129, 130.
 chelonium, 126, 129.
 chelonoidium, 126, 129.
 cirriferum, 126, 127.
 clarki, 119, 121, 129, 130.
 cryptopodium, 122.
 cysticolum, 120, 129.
 cysticolum var. *orientale*, 120.
 deani, 124, 129.
 glabrum, 127.
 japonicum, 127, 129, 130.
 metacrini, 119, 122, 129.
 smithi, 125, 129.
 wheeleri, 124, 129.
 NAOSAURUS, 24, 25.
Nasua, 193.
 narica molaris, 227-235, 255, 256.
 narica narica, 254, 255.
Nemobius alleni, 116.
 sp., 117.
Neohipparion, 142, 146, 147.
 affine, 148.
 dolichops, 148-152.
 gratum, 145-152.
 niobrarensis, 151-153.
 occidentale, 145, 149.
 whitneyi, 138, 139, 148, 149.
Neotoma, 193, 239.
 sinaloæ, 249.
Nephila claviceps, 187.
Neritoma (Oncochilus) occidentalis, 399.
Nomada, 420.
 crawfordi, 437.
 cymbalaria, 439.
 ornithica, 437.
 rohweri, 438.

- Nomada ruidosensis*, 438.
 taraxacella, 437.
Nomia nortoni, 419.
Notharctus, 361.
Notoprotogonia, 358.
Nucula, sp., 133.
Numenius longirostris, 162.
Nycticejus luteus, 485.
Nyctinomus mexicanus, 236, 260.
 plicatus, 482.
Nylanderia imparis, 332.

ODOCOILEUS sinaloæ, 203, 206, 207,
 220, 240-242.
 virginianus, 205.
Odontomachus clarus, 39.
 hæmatodes, 39.
 hæmatodes insularis, 349.
 hæmatodes insularis var. pallens,
 113.
 hæmatodes insularis var. rugi-
 nodis, 349.
 sp., 349.
Omphalina (?) *laminarum*, 459.
Ophioaster, 391.
Ophiocreas, sp., 127.
Ophiocten (?) *bellefourchensis*, 391.
Orchippus, 361.
Oreopasites, 420, 442.
 scituli, 442.
Oreospiza chlorura, 172.
Orocharis gryllodes, 118.
Orphulella olivacea, 115.
 pelinda, 115.
Ortalis wagleri, 163.
Orthocentrus primus, 495.
Orthoptera, Bahaman, 107-118.
Oryzomys, 239.
 melanotis, 210.
 mexicanus mexicanus, 210.
Osborn, Henry Fairfield, milk den-
 tition of the hyracoid *Sagathe-*
rium from the Upper Eocene of
 Egypt, 263-266; *Tyrannosaurus*,
 Upper Cretaceous Carnivorous
 Dinosaur (second communica-
 tion), 281-296.
Osmia, 420.
 abjecta, 447.
 albolateralis, 447, 450.
 armaticeps, 447.
 bruneri, 446, 447.
 chlorops, 448.
 cyaneonitens, 446, 448.
 densa, 447, 448.
 faceta, 448.
 florissanticola, 447, 450.
 fulgida, 446, 447.
 giliarum, 447, 451.
 hypochrysea, 447, 449.
 nigrifrons, 447, 448.
 osmia panzer, 446.
 pentstemonis, 447, 451.
 proxima, 449.
 subtrevoris, 447, 451.
 wheeleri, 449, 451.
 wilmattæ, 447, 448.
Ostrea strigillecula, 397.
Otocoris alpestris aphrasta, 168, 169.
 occidentalis, 168, 169.
Oxyechus vociferus, 162.

 PACHYÆNA, 361.
Pachycondyla ochracea, 305.
 (*Ectomomyrmex*) *japonica*, 304.
 (*Pseudoponera*) *sauteri*, 304,
 328.
Pachynolophus, 361.
Paguma larvata, 479.
Palæomeryx, 381.
Palæonictis, 361.
Palæosyops, 361.
Palæotherium, 361, 387.
Paludina, 274.
Panolia eldi, 490.
 eldi platyceros, 464.
Pantoclis desperdita, 497.
Panurginus, 420.
 cresoniellus, 439.
Parahippus, 385-387.
 brevidens, 388.
 cognatus, 388.
Paroxya atlantica, 116.
 dissimilis, 116.
 sp., 116.
Pecten lindstromi, 133.
Pentacrinus astericus, 389.
 bavaricus, 390.
 briarius, 390.
 cingulatus, 390.
 pentagonalis, 390.
 scalaris, 390.
 subangularis, 390.
Penthestes sclateri, 182.
Perdita florissantella, 440.
 tortifolia, 440.
 wilmattæ, 441.
 zebrata, 440.
Periplaneta americana, 112.
 australasiæ, 112.
Perognathus, 239.
 flavus mexicanus, 249.
 pernix pernix, 211.
Peromyscus, 192, 239.
 hylocetes, 246.
 labecula, 246.
 melanotis melanotis, 246.
 spicilegus simulus, 247.
 spicilegus spicilegus, 208, 247.
 (*Baiomys*) *musculus*, 247.
 (*Baiomys*) *musculus musculus*,
 209.

- Petrochelidon lunifrons melanogaster*, 177.
Phainopepla nitens, 178.
Pheidole ceres, 332, 337.
desertorum, 337, 340.
desertorum var. **comanche**, 339.
desertorum var. **maricopa**, 333, 339.
fervida, 302, 310.
megacephala, 348-350.
nodus, 302, 307, 328.
pallidula, 91.
pusilla, 349.
rhombinoda, 309.
vinelandica, 332, 336.
Pholadomya obscura, 398.
Pimpla antiqua, 494.
Pinna jurassica, 392.
Pipilo fuscus mesoleucus, 173.
maculatus megalonyx, 172.
Pipistrellus abramus, 488.
portensis, 464, 487.
ridleyi, 488.
tenuis, 488.
Piranga hepatica, 175.
rubra cooperi, 175.
Placodus, 20, 22, 25, 26.
Plagiolipsis longipes, 348.
Plagiospiza superciliosa, 173.
Planorbis florissantensis, 460.
Platygeomys gymmerus, 239, 249.
Pleuromya (?) concentrica, 397.
Pliohyrax, 263, 265.
græcus, 265.
kruppii, 265.
Podozamites, 132.
Pogonomyrmex, 38.
barbatus, 405.
barbatus var. *molefaciens*, 37, 405.
barbatus rugosus, 333, 341.
californicus, 40, 105, 333, 335, 341.
dentatus, 335.
desertorum, 335.
imberbiculus, 335.
molefaciens, 91, 95.
occidentalis, 332, 340, 405.
Polioptila plumbea, 182.
Polyergus, 35, 48, 89, 96-99.
rufescens lucidus, 86-89, 96, 97.
Polymastodon, 357.
Polyrhachis, 13.
craddocki, 328.
lamellidens, 302, 327, 328.
Ponera japonica, 302, 306.
opaciceps, 332, 333, 335, 348.
solitaria, 306.
Pocætes gramineus confinis, 175.
Potamotherium, 381.
Prenolepis, 352.
flavipes, 303, 320.
guatemalensis, 333, 342.
kincaidi, 347, 350, 352.
longicornis, 268.
(Nylanderia) imparis, 332, 334, 342.
(Nylanderia) imparis var. *testacea*, 342.
Pristomyrmex japonica, 302, 303, 317, 328.
pungens, 318.
Prochelostoma, 445.
Procyon, 193.
hernandezii, 226.
hernandezii hernandezii, 254.
Progne subis hesperia, 177.
Prosopis, 420.
antennata, 423.
basalis, 423.
divergens, 423.
pygmæa, 423.
tridentula, 423.
tuertonis, 423.
varifrons, 423.
Proteriades, 445.
Protohippus, 137, 138, 388.
mirabilis, 140, 142-145.
perditus, 136-138, 140, 141, 144, 146.
placidus, 140-142, 146.
simus, 139.
supremus, 140, 143-145.
(Pliohippus) pernix, 144.
(Pliohippus) robustus, 144.
Protomognathus, 35.
Psalttriparus melanotis lloydi, 182.
Pseudomonotis jacksoni, 133.
Pseudoponera sauteri, 302.
Pseudotrionyx, 159, 160.
delheidi, 159.
Psithyrus insularis, 453.
Psyllomyia, 267.
testacea, 268.
Pterodon, 361, 363.
Pteronotus davyi fulvus, 236, 261.
Ptilodus, 357.
Puliciphora, 267-269.
boriquenensis, 267-271.
lucifera, 267, 268, 270.
occidentalis, 268, 270.
Putorius frenatus frenatus, 259.
Pycnoscelus surinamensis, 112.
Pyrocephalus rubineus mexicanus, 167.
Pyrrhuloxia sinuata sinuata, 172.
QUENSTEDTIA planulata, 397.
Querquedula cyanoptera, 162.
RATUFA gigantea hainana, 464, 472.

- Regulus calendula cineraceus*, 182.
 Rehn, James A. G., the Orthoptera
 of the Bahamas, 107-118.
Reithrodontomys, 191, 239.
 colimæ, 249.
 tenuis, 210, 248.
Rhinolophus hainanus, 464, 482.
 mitratus, 483.
Rhogas tertiarius, 496.
Rhynchophanes mccownii, 175.
Rhynchopsitta pachyrhyncha, 164.
Rhyssa petiolata, 494.
Ridgwayia pinicola, 183.
Robertsonella, 445.
Rusa unicolor equinus, 464, 467.

SAGHATHERIUM antiquum, 263-266.
 minus, 265.
Salpinctes obsoletus notius, 181.
Sarcophaga, 416.
Sauropoda, 295.
Sayornis nigricans nigricans, 168.
 saya, 168.
Scardafella inca, 163.
Schistocerca, 108, 109.
 alutacea, 109, 115.
 americana, 109, 116.
Sciurus, 381.
 castaneiventris, 473.
 erythraeus insularis, 464, 473.
 maccllelandi, 475, 476.
 poliopus cervicalis, 243.
 poliopus colimensis, 243.
 poliopus nemoralis, 244.
 poliopus tepicanus, 243.
 sinaloensis, 208.
 vulgaris, 475.
Scotophilus castaneus, 486.
 castaneus consobrinus, 464.
 heathii, 485.
 kuhlii, 485.
 kuhlii insularis, 464, 485.
 wroughtoni, 486.
Scytodes longipes, 186.
Selasphorus platycercus, 167.
Selenops aissus, 188.
Semnopithecus nemæus, 463, 464,
 489, 490.
Septifera sturgisensis, 393.
Setophaga picta picta, 179.
Sialia mexicana bairdi, 183.
 sialis azurea, 183.
Sigmodon, 239.
 alleni, 209, 210.
 borucæ, 248.
 colimæ, 209, 210, 248.
 hispidus colimæ, 209, 247.
 hispidus major, 210.
 hispidus mascotensis, 209.
 mascotensis, 209, 248.
 toltecus, 248.

Sigmodon vulcani, 247, 248.
 Sinclair, W. J., volcanic ash in the
 Bridger beds of Wyoming, 273-
 280.
Sitta carolinensis mexicana, 182.
Solenopsis fugax, 302, 307.
 geminata var. *aurea*, 333, 336,
 348, 349.
Sorex murinus, 481.
 myosurus, 481.
 oreopolis, 260.
Spectrellum mexicanum, 236, 260.
Sphærium florissantense, 461.
Sphecodes, 420.
 eustictus, 426.
 pecosensis, 426.
 sophiæ, 427.
 sulcatulus, 426.
 washingtoni, 427.
Sphenodon, 295.
Sphenophyllum, 132.
Sphyrapicus thyroideus, 166.
 varius nuchalis, 166.
Spilogale, 103.
 angustifrons angustifrons, 259.
Spinoliella, 420, 443.
 scitula, 426, 440, 443.
Spinus pinus pinus, 175.
Spizella pallida, 174.
 socialis arizonæ, 174.
Staurotypus, 158, 159.
 salvinii, 158.
Stelgidopteryx serripennis, 176.
Stelis, 420.
 montana, 445, 446.
Stenamma brevicorne, 314.
 owstoni, 303, 314.
 (Aphænogaster) *famelicum*, 315.
 (Aphænogaster) *fulvum*, 92.
 (Aphænogaster) *fulvum* var. *tex-*
 anum, 341.
 (Aphænogaster) *tennesseense*,
 92.
 (Ischnomyrmex) *albisetum*, 335.
 (Ischnomyrmex) *cockerelli*, 335.
 (Messor) *aciculatum*, 315.
 (Messor) *aciculatum* var. *brun-*
 neicorne, 315, 328.
 (Messor) *barbarum* var. *acicu-*
 latum, 315.
 (Messor) *pergandei*, 335.
Stenoeöfiber, 381.
Stethopathus ocellatus, 267.
Stigmatomma pallipes, 95.
Stratægus julianus, 268.
Strongylognathus, 35.
Strumigenys godeffroyi var. *lewisi*,
 302, 318, 328.
Sturnella neglecta, 171.
Sysphincta algerica, 304.
 europæa, 304.

- Sysphincta mayri*, 304.
 melina, 304.
 pergandei, 304.
 watasei, 302, 303, 328.
- TACHYGINETA *thalassina lepida*, 176.
Tafalisca lurida, 118.
- Tamiops**, 464, 475.
 macclellandi hainanus, 464, 476.
 macclellandi rudoni, 464, 477.
- Tancredia inornata*, 396.
 transversa, 396.
- Tapinoma erraticum*, 104, 320.
 sessile, 320, 332, 342, 415.
- Tatu novemcinctum mexicanum*,
 196, 240.
- Tayassu angulatum*, 198, 199.
 angulatum humerale, 240.
 angulatum sonoriense, 198.
 pecari, 201.
 tajacu, 201.
 torvum, 201.
- Tayra barbara senex*, 235.
- Technomyrmex gibbosus*, 302, 303,
 319, 328.
- Teredo* (?), 398.
- Termitomyia*, 268.
- Termitoxenia*, 268.
- Terrapene carolina*, 31.
 marmochii, 31.
 ornata, 31.
 putnami, 27, 30.
- Tertiary times, hypothetical out-
 lines of the continents in, 353-
 383.
- Tetramorium cæspitum*, 302, 317,
 350.
 guineense, 350.
- Theridium rufipes*, 187.
 studiosum, 187.
- Thomomys*, 193, 239.
- Thryomanes bewickii eremophilus*,
 181.
- Titanotherium*, 365, 381.
- Titusella**, 420, 445.
 pronitens, 446.
- Toxostoma curvirostre curvirostre*,
 180.
- Trachemys euglypha*, 30.
Trachymyrmex septentrionalis, 99.
- Triceratops*, 282, 296-300.
- Triepeolus*, 420.
- Trigonia poststriata*, 396.
 sturgisensis, 394.
- Trionyx gangeticus*, 156.
 hurum, 156.
 leithii, 156.
- Trochilus alexandri*, 167.
- Trogon ambiguus*, 164.
- Tupaia modesta*, 464, 481.
- Turbo* (?), 133.
- Tyrannosauridæ**, 283.
- Tyrannosaurus*, 281-296.
 rex, 281, 282, 284.
- Tyrannus vociferans*, 168.
- UINTATHERIUM, 361.
- Uloborus americanus*, 185.
 geniculatus, 185.
- Unio*, 274, 276, 279.
- Urocyon cinereoargenteus scottii*,
 193, 224, 253.
- Ursus*, sp., 225, 464, 481.
 malayanus, 481.
 tibetanus, 481.
- Urubitinga anthracina*, 163.
- VESPERTILIO fuscus**, 260.
- Vesperugo abramus*, 488.
- Vireo belli medius*, 179.
 huttoni stephensi, 178.
- Viverra zibetha*, 479.
- Viverricula malaccensis*, 479.
- Vollenhovia emeryi*, 302, 303, 312,
 328.
 subtilis, 313.
- WANDOLLECKIA**, 267, 268.
 cooki, 267.
- Wheeler, William Morton, the habits
 of the tent-building ant (*Crematogaster lineolata* Say), 1-
 18; on the founding of colonies
 by queen ants, with special
 reference to the parasitic and
 slave-making species, 33-105;
 a new wingless fly (*Puliciphora*
borinquenensis) from Porto Rico
 267-271; the ants of Japan, 301-
 328; the ants of the Grand
 Cañon, 329-345; the ants of the
 Bermudas, 347-352; an etho-
 logical study of certain mal-
 adjustments in the relations of
 ants to plants, 403-418.
- Wheeleria*, 35.
 santschii, 104.
- Whitfield, R. P., notes on some Jur-
 assic fossils from Franz Josef
 Land, brought by a member of
 the Ziegler Exploring Expedi-
 tion, 131-134.
- Whitfield, R. P., and E. O. Hovey,
 remarks on and descriptions of
 Jurassic fossils of the Black Hills,
 389-402.
- Wilsonia pusilla chryseola*, 179.
 pusilla pileolata, 179.
- Wulfilia ventralis*, 186.
- Wyeomyia*, 416.
 smithii, 416.

-
- XANIONOTUM, 267.
Xanthosmia, 449.
Xenochelys, 27, 29.
 formosa, 27, 29.
Xiphidion *brevipenne*, 116.
 fasciatum, 116.
 insulare, 116.
- YOLDIA, sp., 133.
- ZAMELODIA *melanocephala*, 172.
Zenaidura *macroura macroura*, 163.
Zonotrichia *leucophrys leucophrys*,
 175.
Zygoramma, 30.

Vol. III. Anthropology (not yet completed).

- PART I.—Symbolism of the Huichol Indians. By Carl Lumholtz. Pp. 1-228. pl. i-iv, and 291 text figures. May, 1900. Price, \$5.00.
- PART II.—The Basketry of the Tlingit. By George T. Emmons. Pp. 229-277. pl. v-xviii, and 73 text figures. July, 1903. Price, \$2.00.
- PART III.—Decorative Art of the Huichol Indians. By Carl Lumholtz. Pp. 279-327. pl. xix-xxiii, and 171 text figures. November, 1904. Price, \$1.50.

Vol. IV. Anthropology (not yet completed).*Jesup North Pacific Expedition, Vol. II.*

- PART I.—Traditions of the Chilcotin Indians. By Livingston Farrand. Pp. 1-54. June, 1900. Price, \$1.50.
- PART II.—Cairns of British Columbia and Washington. By Harlan I. Smith and Gerard Fowke. Pp. 55-75. pl. i-v. January, 1901. Price, \$1.00.
- PART III.—Traditions of the Quinault Indians. By Livingston Farrand, assisted by W. S. Kahnweiler. Pp. 77-132. January, 1902. Price, \$1.00.
- PART IV.—Shell-Heaps of the Lower Fraser River. By Harlan I. Smith. Pp. 133-192. pl. vi, vii, and 60 text figures. March, 1903. Price, \$1.00.
- PART V.—The Lillooet Indians. By James Teit. Pp. 193-300. pl. viii and ix, 40 text figures. 1906. Price, \$1.80.

Vol. V. Anthropology.*Jesup North Pacific Expedition, Vol. III.*

- PART I.—Kwakiutl Texts. By Franz Boas and George Hunt. Pp. 1-270. January, 1902. Price, \$3.00.
- PART II.—Kwakiutl Texts. By Franz Boas and George Hunt. Pp. 271-402. December, 1902. Price, \$1.50.
- * PART III.—Kwakiutl Texts. By Franz Boas and George Hunt. Pp. 403-532. 1905.

Vol. VI. Anthropology.*Hyde Expedition.*

- The Night Chant, a Navaho Ceremony. By Washington Matthews. Pp. i-xvi, 1-332. pl. i-viii (5 colored), and 19 text figures. May, 1902. Price, \$5.00.

Vol. VII. Anthropology (not yet completed).*Jesup North Pacific Expedition, Vol. IV.*

- PART I.—The Decorative Art of the Amur Tribes. By Berthold Laufer. Pp. 1-79. pl. i-xxxiii, and 24 text figures. December, 1901. Price, \$3.00.

Vol. VIII. Anthropology (not yet completed).** Jesup North Pacific Expedition, Vol. V.*

- PART I.—The Haida of Queen Charlotte Islands. By John R. Swanton. Pp. 1-300. pl. i-xxvi, 4 maps, and 31 text figures.

Vol. IX. Zoölogy and Palæontology (not yet completed).

- PART I.—The Osteology of *Camposaurus* Cope. By Barnum Brown. Pp. 1-26. pl. i-v. December, 1905. Price, \$2.00.
- PART II.—The Phytosauria, with Especial Reference to *Mystriosuchus* and *Rhytidon*. By J. H. McGregor. Pp. 27-101. pl. vi-xi, and 26 text figures. February, 1906. Price, \$2.00.
- PART III.—Studies on the Arthrodira. By Louis Hussakof. May, 1906. Pp. 103-154. pl. xii and xiii, and 25 text cuts. Price, \$3.00.

Vol. X. Anthropology (not yet completed).** Jesup North Pacific Expedition, Vol. VI.*

- PART I.—Religion and Myths of the Koryak. By W. Jochelson. Pp. 1-382. pl. i-xiii, 1 map, and 58 text figures. 1906.

Vol. XI. Anthropology (not yet completed).* *Jesup North Pacific Expedition, Vol. VII.*

PART I.—The Chukchu: Material Culture. By W. Bogoras. Pp. 1-276, pll. i-xxxii, 1 map, and 199 text figures. 1904.

Vol. XII. Anthropology (in preparation).* *Jesup North Pacific Expedition, Vol. VIII.***Vol. XIII. Anthropology** (in preparation).* *Jesup North Pacific Expedition, Vol. IX.***Vol. XIV. Anthropology** (not yet completed).* *Jesup North Pacific Expedition, Vol. X.*

PART I.—Kwakiutl Texts. Second Series. By Franz Boas and George Hunt. Pp. 1-269. 1906. Price, \$2.80.

ETHNOGRAPHICAL ALBUM.*Jesup North Pacific Expedition.*

Ethnographical Album of the North Pacific Coasts of America and Asia. Part I, pp. 1-5, pll. 1-28. August, 1900. Sold by subscription, price, \$6.00.

BULLETIN.

The matter in the 'Bulletin' consists of about twenty-four articles per volume, which relate about equally to Geology, Palaeontology, Mammalogy, Ornithology, Entomology, and (in the recent volumes) Anthropology, except Vol. XI, which is restricted to a 'Catalogue of the Types and Figured Specimens in the Palaeontological Collection of the Geological Department,' and Vols. XV, XVII, and XVIII, which relate wholly to Anthropology.

Volume	I, 1881-86.....	Out of print.	Volume	XIII, 1900.....	Price, \$4.00
"	II, 1887-90.....	Price, \$4.75	"	XIV, 1901.....	" 4.00
"	III, 1890-91.....	" 4.00	"	XV, Part I, 1901...	" 3.00
"	IV, 1892.....	" 4.00	"	XVI, 1902.....	" 5.00
"	V, 1893.....	" 4.00	"	XVII, Part I, 1902..	" 1.50
"	VI, 1894.....	" 4.00	"	" " II, " ..	" .75
"	VII, 1895.....	" 4.00	"	" " III, 1905..	" 2.00
"	VIII, 1896.....	" 4.00	"	" " IV, " ..	" .75
"	IX, 1897.....	" 4.75	"	XVIII, " I, 1902..	" 2.00
"	X, 1898.....	" 4.75	"	" " II, 1904..	" 1.50
"	XI, Part I, 1898..	" 1.25	"	" " III, 1905..	" .50
"	" " II, 1899..	" 2.00	"	XIX, 1903.....	" 6.00
"	" " III, 1900..	" 2.00	"	XX, 1904.....	" 5.00
"	" " IV, 1901..	" 1.75	"	XXI, 1905.....	" 5.00
"	" (Complete)....	" 5.00	"	XXII, 1906.....	" 6.00
"	XII, 1899.....	" 4.00			

AMERICAN MUSEUM JOURNAL.

The 'Journal' is a popular record of the progress of the American Museum of Natural History, issued quarterly. Price, \$1.00 a year. Volumes I-VI, 1900-1906.

For sale at the Museum.

* Published by E. J. Brill, Leiden, Holland. Not on sale at the Museum. American Agent, G. E. Stechert, 129 West 20th Street, New York City.