ANNOTATED BIBLIOGRAPHY OF PENNSYLVANIAN AND PERMIAN
TRILOBITES FROM KANSAS AND ADJACENT AREAS
OF MISSOURI, NEBRASKA, AND OKLAHOMA

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INTRODUCTION

Trilobites are a persistent component of Carboniferous (Mississippian and Pennsylvanian) and Permian biotas of the North American Midcontinent. Numerically, faunas rarely contain more than 1 percent trilobites, although locally they can contain up to about 20 percent trilobite sclerites (counting only cranidia, librigenae, and pygidia). Trilobites are present in most marine facies of Pennsylvanian and Permian rocks in Kansas and neighboring states, but tend to be most abundant in limestones, especially coated grain (so-called oolite) intervals, and calcareous shales. The diversity of trilobite taxa in any one fauna is low, rarely exceeding two species. Trilobites are almost always absent from black shales, and rarely present in dark gray shales.

The purpose of this annotated bibliography is to provide a source of information about the Pennsylvanian and Permian trilobites of Kansas. Some citations also cover neighboring areas of Missouri, Nebraska, and Oklahoma. Most taxa reported from those areas are the same as those reported from Kansas. This bibliography includes only published sources, except for Gheyselinck (1937), in which the manuscript species Phillipsia (Neophillipsia) decurtata was described. No attempt has been made to identify the other numerous references in unpublished theses and dissertations. The bibliography is fairly complete
for illustrated or described specimens, particularly those of Kansas. Some material reported in faunal lists or passing references in texts, however, has not been included.

Taxonomic nomenclature in this text is exactly that published in the cited papers. Species reported from Kansas, Missouri, Nebraska, or Oklahoma, in all their published combinations, are:

1) **Phillipsia cliftonensis** Shumard in Shumard and Swallow, 1858;
   **Ditomopyge cliftonensis** (Shumard in Shumard and Swallow, 1858)

2) **Phillipsia** (Neophillipsia) **decurtata** Gheyselinck in Weller 1944; **Ditomopyge decurtata** (Gheyselinck in Weller, 1944)

3) **Cheiropyge kansasensis** Weller, 1944

4) **Ditomopyge lansingensis** Newell, 1931

5) **Proetus longicaudus** Hall, 1861

6) **Phillipsia major** Shumard in Shumard and Swallow, 1858

7) **Phillipsia missouriensis** Shumard in Shumard and Swallow, 1858;
   **Ameura missouriensis** (Shumard in Shumard and Swallow, 1858)

8) **Griffithides morrowensis** Mather, 1915; **Paladin** (Paladin)
   morrowensis Mather, 1915; **Paladin morrowensis** (Mather, 1915)

9) **Phillipsia nodocostata** Hare, 1891

10) **Griffithidesolsoni** Williams, 1933; **Ditomopygeolsoni**
    (Williams, 1933)

11) **Griffithides parvulus** Girty, 1911; **Ditomopygeparvulus**
    (Girty, 1911); **Ditomopyge parvula** (Girty, 1911)

12) **Phillipsia sangamonensis** Meek and Worthen, 1865; **Ameura**
sangamonensis (Meek and Worthen, 1865)

13) **Phillipsia scitula** Meek and Worthen, 1865; **Phillipsia** *(Griffithides) scitula* Meek and Worthen, 1865; **Griffithides scitulus** (Meek and Worthen, 1865); **Cyphinium scitula** (Meek and Worthen, 1865); **Ditomopyge scitula** (Meek and Worthen, 1865)

14) **Anisopyge whitei** Pabian and Fagerstrom, 1972

Because it has been impossible to ascertain the correct identity of reported but unillustrated specimens, it is not possible to authoritatively synonymize all cited materials. For synonyms of most trilobite taxa from the late Paleozoic of Kansas and adjacent areas, see Pabian and Fagerstrom (1972).

Results of a phylogenetic (numerical cladistic) analysis on some late Paleozoic trilobites are reported. The study includes three species that are found in Pennsylvanian rocks of Kansas, Missouri, Nebraska, or Oklahoma (Ameura missouriensis, Ditomopyge decurtata, and D. scitula).


Trilobite pygidia are listed as occurring in the South Bend Limestone Member and the Stoner Limestone Member of the Stanton Limestone (Pennsylvanian) at section B1, an abandoned quarry at the center of the east line of sec. 23, T. 18 S., R. 19 E., Franklin County, Kansas (p. 46).

Griffithides sp. is recorded from the uppermost few feet of the Eskridge Shale (Pennsylvanian) at U.S.G.S. locality 6162, near the center of sec. 11, T. 34 S., R. 7 E., Cowley County (p. 58). The identification was made by G. H. Girty.


Trilobites such as Phillipsia (fig. 53) are listed as being found in the Pennsylvanian of Kansas.


Phillipsia cliftonensis, P. major, and P. scitula are listed from Pennsylvanian rocks in various counties of Kansas.

The distribution of trilobite remains in Pennsylvanian cyclothemes of the Midcontinent is related to proposed depth-related communities in which they occur. Trilobites (Ditomopyge is the only genus listed) are indicated as present in deep-water, moderate-depth, and shallow-water communities: the Sinuitina-juvenile ammonoid-Anthraconeilo subcommunity, the Trepospira-mature ammonoid-Anthraconeilo subcommunity, the moderate-depth stenohaline communities (brachiopod, crinoid, sponge, fusulinid, coral), and the shallow-water molluscan communities (fig. 9, tables 2, 3, p. 176).


Phillipsia major is cited as rare in the Luta Formation (Permian) of Kansas and Oklahoma (p. 247).


A specimen of Ameura sangamonensis from the Francis Shale
(Pennsylvanian) in the shale pit at the brick plant south of Ada, Oklahoma is illustrated. The dorsal surface of much of the cephalon is encrusted by small tubes referred to the serpulid worm Cornulites. For a revised interpretation of the epibiont, see Branson (1964).

Branson states that "it appears probable that A. sangamonensis, A. major, A. missouriensis (Shumard), Proetus longicaudus Hall, and Phillipsia nodocostata Hare all belong to a single species."


The specimen of Ameura sangamonensis previously illustrated as Figure 2 of Branson (1961) is reillustrated. Minute tubes previously referred to as Cornulites are suggested to represent a foraminifer, Minammodytes(?).


Ditomopyge parvulus is reported and illustrated from the Lenapah Limestone (Pennsylvanian) of Oklahoma.


The previously lost "cotypes" (=syntypes) of Griffithides olsoni from the Cherokee Group (Pennsylvanian) of central Missouri are reillustrated and described. Also reported are studies on a large sample of additional material from "strip pits in the Desmoinesian 8 miles north of Columbia, Missouri," and from Texas. G. olsoni is placed in synonymy with Ditomopyge scitula.


Clusters of numerous Ditomopyge scitula present in a thin argillaceous Pennsylvanian limestone in Missouri are attributed to an opportunistic life habit (p. 323, fig. 7C, Table 2).


Trilobites are listed as being "sometimes found in Pennsylvanian rocks in eastern Kansas" (p. 348).

The stratigraphic ranges and presumed evolutionary patterns of North American Carboniferous trilobites, including those reported from Kansas and adjacent states, are summarized in text-figure 4.


An algal-bank complex in the Wyandotte Limestone (Pennsylvanian) of eastern Kansas contains rare trilobites in the stromatolite-sponge, algal-bank, calcarenite, oolite, and shelly mud facies (table 2).


A "small trilobite" is listed as present in the Merriam Limestone (Pennsylvanian) at section F, south line of sec. 23, T. 30 S., R. 15 E., a roadcut on highway K96, west of Neodesha, Kansas (p. 331).

Trilobites are indicated as occurring in the Pennsylvanian Nodaway Coal Member of the Severy Formation (fig. 33) at a section in Pawnee County, Nebraska.


Trilobites are indicated as occurring "very rarely" in the Merriam Limestone (Pennsylvanian) at NE SW sec. 13, T. 11 S., R. 23 W., Wyandotte County, Kansas (p. 116).

The new manuscript species *Phillipsia* (*Neophillipsia*) decurtata, putatively from Permian rocks near Wichita, Kansas, is described. Gheyselinck's manuscript name was later used by Weller (1944) in a review of Permian trilobite genera. Weller attributed the name to Gheyselinck (1937). Because Weller's paper includes the first published citation of *Phillipsia* (*Neophillipsia*) decurtata, the species should be attributed to Gheyselinck in Weller (1944). See additional comments under Weller (1944).


The new species *Griffithides parvulus* is described from the Wewoka Formation (Pennsylvanian) of Wewoka and Coalgate quadrangles, Oklahoma.

Griffithides parvulus and Ameura sangamonensis are described and illustrated from the Wewoka Formation (Pennsylvanian) of Wewoka and Coalgate quadrangles, Oklahoma.

Grant, R. E. 1966. Late Permian trilobites from the Salt Range, west Pakistan. Palaeontology 9:64-73.

Two specimens of Ditomopyge decurtata are illustrated (pl. 13, figs. 4-5). One (pl. 13, fig. 4) is from the Beattie Limestone, near Wichita, Kansas, and the other (pl. 13, fig. 5) is from the Florena Shale Member of the Beattie Limestone, east of Grand Summit, Kansas.


The phylogenetic relationships of some proetid trilobites, including Ameura sangamonensis and Ditomopyge scitula from Kansas and adjacent areas, are discussed.

Hahn, G., and R. Hahn. 1969. Trilobitae carbonici et permici I,

*Cheiropyge kansasensis* from the Haskell Limestone, north of Lawrence, Kansas is listed (p. 42).


The following trilobite species from Kansas or adjacent areas are listed: *Ditomopyge cliftonensis* (p. 174-175), *D. decurtata* (p. 175), *D. lansingensis* (p. 177-178), *D.olsoni* (p. 179), *D. parvula* (p. 181), and *D. sp. 5 of Weller* (1937) (p. 190). *Phillipsia (Griffithides) scitula*, the type species of *Cyphinium* (a junior synonym of *Ditomopyge*), is listed on p. 172.


The following trilobite species from Kansas or adjacent areas are listed: *Ameura major* (p. 337-338), and *A.*
missouriensis (p. 338-340).

Hare, S. J. 1891. Trilobites of the Upper Coal Measure Group at Kansas City, Mo. Kansas City Science 5:33-36.

Phillipsia major and the new species Phillipsia nodocostatus are reported from the Upper Coal Measure Group (Pennsylvanian) at Kansas City, Missouri.


Ditomopyge is listed as present in calcareous shale units of the Speiser Shale and Wreford Limestone (p. 62) and in cherty limestones of the Wreford Limestone (p. 67). Both occurrences are Permian in age. More specific listed occurrences of trilobites are: ?Ditomopyge from the Havensville Shale Member of the Wreford Limestone (p. 120); trilobite pygidium from the Schroyer Limestone Member of the Wreford Limestone (p. 122); trilobite from the Havensville Shale Member of the Wreford Limestone (p. 129).

**Phillipsia major** is listed from the Oswego Limestone (Pennsylvania) of Kansas (p. 152).


Trilobite pieces are reported from calcarenites of the Bolton limestone bed of the Stanton Formation (Pennsylvania) in southeastern Kansas (p. 20).


**Griffithides** sp. (as identified by G. H. Girty) is listed from the Kansas City Formation (Pennsylvania) in the Smithville Quadrangle, Kansas. **Phillipsia major** (as identified by G. H. Girty) is listed from the Lansing Formation (Pennsylvania) of Kansas.

Holterhoff, P. F., and R. K. Pabian. 1990 [dated 1989]. Paleoenvironmental implications of a pyritized molluscan fauna from the Bennett Shale Member, Red Eagle Formation (Lower Permian), Richardson County, Nebraska. Compass of
Ameura and Ditomopyge are listed as present in the Bennett Shale, Howe Limestone, and Roca Shale members of the Red Eagle Formation, Richardson County, Nebraska.


Trilobites are reported from the Florena Shale Member of the Beattie Limestone (Permian) in Kansas.


Ditomopyge is listed from two sections in the Beattie Limestone (Permian) of Kansas: Cottonwood Limestone Member at locality 15, NW NW sec. 36, T. 33 S., R. 7 E., Cowley County (p. 235); Florena Shale Member at locality 10, railroad cut in NW SE sec. 36, T. 16 S., R. 9 E., Morris County (p. 237).

In Cowley, Elk, and Greenwood counties, Kansas, the Florena Shale Member of the Beattie Limestone (Permian) is said to be "remarkable for the presence of excellently preserved complete specimens of a small trilobite" (p. 60).


Phillipsia major is reported and illustrated from the Pennsylvanian of Missouri.


A trilobite pygidium, said to be probably a species of Ditomopyge, is listed from the Neva Limestone Member of the Grenola Limestone (Permian) in southern Kansas (p. 141). Ditomopyge? (possibly the specimen listed on p. 141 -- L.E.B.) is listed from the Neva Limestone Member at locality 2, SE 1/4 sec. 4, T. 31 S., R. 8 E., railroad cuts along Santa Fe Railroad, and in small stream adjoining the railroad, between Murphy oil lease and Grand Summit (p.

Occurrences of *Ameura missouriensis* and *Ditomopyge scitula* in the Permian Wreford megacyclothem of Kansas, Nebraska, and Oklahoma are recorded. *A. missouriensis* is said to occur in only the lower Havensville Limestone of central Kansas. *D. scitula* is found in the interval from the uppermost Speiser Shale to the middle Schroyer Limestone Member of the Wreford Limestone. Most common in calcareous shale, cherty limestone, and brachiopod-molluscan limestone, it is concluded that *D. scitula* "preferred off-shore, deeper-water (but still rather shallow), normal-marine paleoenvironments within the Early Permian Mid-Continent shelf sea."

Two pygidia of *D. scitula* have possible fossilized color markings. They consist of a row of small dark, round spots (one per segment) on the lateral flanks of the axis.

Cyclic Sedimentation, Paleogeography, Paleoecology, and Biostratigraphy in Kansas and Nebraska. Nebraska Geological Survey, Guidebook for a pre-meeting field trip in conjunction with the 1989 annual meeting of the Geological Society of America (St. Louis).

Trilobite fragments are listed as occurring in the conglomeratic sequence in the lower part of the deposit in the Hamilton quarries. The deposit is in the Calhoun Shale, which is Pennsylvanian or Permian in age.


The new species Griffithides morrowensis is described from the Brentwood Limestone of Sawney Hollow, Adair County, Oklahoma.


Pygidial and thoracic remains of Permian trilobites (cf. Ditomopyge) are indicated as being present in the Bennett and Glenrock members of the Red Eagle Limestone (p. 37;
figs. 4, 18, 22).


Ditomopyge is described as locally present in the Utopia Limestone [Member] of the Howard Limestone (Pennsylvanian) in southeastern Kansas.


Ditomopyge is described as being found locally in the Utopia Limestone Member of the Howard Limestone (Pennsylvanian) in southeastern Kansas.


Ditomopyge sp. cf. D. decurtata and Phillipsia major are
listed as occurring in shale beds or goethite above the	nodulose zone at the base of the Robbins Shale in Douglas
County, Kansas (p. 2027).

Moore, R. C. 1964. Paleoeocological aspects of Kansas
Pennsylvanian and Permian cyclothsms, p. 287-380. In D. F.
Merriam (ed.), Symposium on Cyclic Sedimentation. Kansas

Trilobites listed as being associated with paleoecologic
assemblages from the Pennsylvanian or Permian of Kansas are:
**Ditomopyge**, Speiser-type (**Derbyia**) assemblage (p. 308);
**Ditomopyge**, Florena-type (**Neochonetes-Derbyia**) assemblage
(p. 315); pygidia and other remains, Beil-type (**Pulchratia**)
assemblage (p. 315); **Ameura**, **Ditomopyge**, and **Paladin**, Beil-
type (**Pulchratia**) assemblage (p. 318); **Ditomopyge**, Threemile
(**Composita-Fenestrellina**) assemblages (p. 332); **Ditomopyge**,
Leavenworth-type (**Isogramma**) assemblage (p. 335); **Ameura**,
Drum-type (**Eucnospira**) assemblages (p. 341). Fusulinids
and trilobites (**Ditomopyge**) occur together in a marker
horizon (unit 6 of the Cottonwood Member of the Beattie
Limestone) in southern Kansas or northern Oklahoma (p. 354).
**Ditomopyge** is also listed from the Florena Shale Member of
the Beattie Limestone in Cowley, Elk, Greenwood, Chase,
Morris, Riley, and Marshall counties, Kansas, and Osage
County, Oklahoma (p. 357, fig. 38 [as "T"]).
A species of *Ditomopyge* is illustrated by a line drawing (Supplement, fig. 2.7).


Well-preserved specimens of a small trilobite are indicated as being locally common in the Floreana Shale Member of the Beattie Limestone (Permian) of southern Kansas (p. 166).


Well-preserved specimens of a small trilobite are indicated as being locally common in the Floreana Shale Member of the Beattie Limestone (Permian) of southern Kansas (p. 47).


*Phillipsia major* is reported from the Francis Shale (Pennsylvanian) in the shale pit at the brick plant south of Ada, Oklahoma (p. 118). *Phillipsia sangamonensis* is illustrated from that locality (pl. 53, fig. 11), but not
indicated in the faunal list. *P. sangamonensis* is also listed from the McAlester, Wewoka, and Holdenville formations (Pennsylvanian).


In the Swope Limestone (Pennsylvanian) of southeast Kansas, trilobite fragments are listed as occurring in the argillaceous subfacies of the biomicrite facies (p. 8), and the mottled biomicrite facies (p. 10).


*Ditomopyge? decurtata* is described and illustrated from Cowley County, Kansas. It is present in the Florena Shale Member of the Beattie Limestone and in beds at least 30 m stratigraphically above the Florena Shale Member. Both occurrences are Permian in age. The authors consider Weller (1940) to have been probably correct in considering the Florena Shale Member in Cowley County to have been the origin of Gheyselinck's type specimen.
A specimen of ?Ditomopyge sp. is recorded from the Permian Jim Creek Limestone Member of the Root Shale (p. 97). A pygidium and a cephalon from the Americus Limestone Member of the Foraker Limestone (Permian) are referred with certainty to Ditomopyge (p. 97). Other sclerites of trilobites not referred to genus are noted as occurring in shaly limestone or calcareous shale beds (p. 97).


The new genus and species Ditomopyge lansingensis is described. Syntypes of D. lansingensis are said to have been collected from "the calcareous yellowish shale at the middle of the Plattsburg limestone, Lansing group, on the main highway east of Ottawa, Kansas, near the Franklin County line, middle of the north line of sec. 36, T. 16 S., R. 21 E." The calcareous yellowish shale is the Hickory Creek Shale Member of the Plattsburg Limestone Formation (Pennsylvanian).

Unpublished records in the files of the Kansas Geological Survey differ slightly from Newell's published locality description. A record of a stratigraphic section measured by Newell "10 miles east of Ottawa on Paola road, at county line west of bluff of creek" in "Sec. 27, T. 16 S., R. 21 Franklin Co.," is indicated as "Type loc
Ditomopyge lansingensis." Unit 9 on the section (Hickory Creek Shale Member of the Plattsburg Limestone) is indicated as containing "Ditomopyge lansingensis (types)."


Ditomopyge decurtata from the Permian of Kansas is illustrated (pl. 4, figs. 1, 2).


Trilobites are indicated as occurring in the Permian Hughes Creek Member of the Foraker Formation (fig. 31) at a section in Richardson County, Nebraska.

Biometrical study of specimens of *Ameura sangamonensis* from the Bonner Springs Shale (Pennsylvanian) in Cass County, Nebraska suggests that the dominant growth pattern was isometric.


*Ameura missouriensis* and *Ditomopyge scitula* are described from Pennsylvanian and Permian (Missourian to Big Blue) strata, and the new species *Anisopyge whitei* is described from Permian (Big Blue) strata, of southeastern Nebraska. *Ditomopyge lansingensis*, the type species of the genus, which is from the Pennsylvanian of eastern Kansas, is synonymized under *Phillipsia (Griffithides) scitula*. The generic name *Ditomopyge* is used for *P. (G.) scitula*.

Pabian, R. K., and R. M. Joeckel. 1989. Stop 17. Four mile hill, about 8.5 mi south and 1.0 mi east of Humboldt, SW 1/4

Trilobites are indicated as occurring in the Permian Neva Member of the Grenola Formation at a section in Richardson County, Nebraska (fig. 37).


Two trilobites are reported from Pennsylvanian rocks of Okfuskee County, Oklahoma: Ameura sangamonensis from the Wewoka and Holdenville formations (p. 45), and A. major from the Coffeyville Formation (p. 60).

Phillipsia major is described and figured from the oolitic member of the Drum Limestone (Pennsylvanian) of Turner, Elsmore, Cherryville, and Independence, Kansas, and from Kansas City, Missouri.


Ditomopyge decurtata is listed and illustrated. The figured specimen is from the Florena Shale Member of the Beattie Limestone (Permian) of Grand Summit, Kansas.


Three new species are described: 1) Phillipsia missouriensis Shumard from the "Middle Coal Measures at Lexington, Missouri;" 2) Phillipsia major Shumard from the "Upper Coal Measures" in "Clinton County, Missouri, and in the valley of Verdigris River, and twelve miles south of Lecompton on the Santa Fé road, Kansas Ter.;" and 3) Phillipsia cliftonensis Shumard from "the superior beds of the Upper Coal Measures, at Clifton Park, Kansas Ter."

The holotype of *Paladin morrowensis* from Adair County, Oklahoma is reillustrated, together with additional specimens from Arkansas.


The history of the names *Ditomopyge* and *D. lansingensis* (see Newell, 1931; Weller, 1935) is given. *Ditomopyge* and related genera are discussed.


Undetermined trilobites are listed as rarely occurring in the Luta Limestone Member of the Odell Shale (Permian) in Kay County, Oklahoma (table 2), and in the Winfield Limestone in Cowley County, Kansas, and Kay County, Oklahoma.
(table 3).


**Phillipsia major**, which was first described from the Pennsylvanian of Missouri, W is listed.


**Ameura sangamonensis** is listed from the Wewoka and Holdenville formations (Pennsylvanian) of Hughes County, Oklahoma.


The new genus Cyphinium is erected. **Phillipsia scitula** is the type species.

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*Ditomopyge lansingensis*, the type species of the genus, is recognized as having been described on the basis of two immature pygidia that possess characters not present in mature specimens. Additional specimens from the type locality (see comments under Newell, 1931) are illustrated by line drawings. An ontogenetic series of specimens from the Pennsylvanian of Warren County, Indiana suggests that tiny spined pygidia of *D. lansingensis* "are parts of the young of trilobites belonging to the *Griffithides scitulus* series." *Ditomopyge* is thus redefined on the basis of its putative mature morphology.


Carboniferous trilobite genera are reviewed. *Ditomopyge* is recognized (type species, *D. lansingensis* from the Pennsylvanian Plattsburg Formation of Kansas). Among proposed new genera is *Ameura* (type species, *Phillipsia sangamonensis*, which is cited as a junior synonym of *A. missouriensis*), and *Paladin* (type species, *Griffithides morrowensis*).

Evolutionary patterns among some Mississippian and Pennsylvanian trilobites from North America are described. Illustrations of trilobites from Kansas, Missouri, Nebraska, or Oklahoma include *Dictomopyge olsoni*, *D. scitula*, *D. lansingensis*, and *D. n. sp.* from the Florena Shale.


Permian trilobite genera and subgenera are reviewed. Gheyselinck’s (1937) manuscript species *Phillipsia* (Neophyllipsia) *decurtata* is first published. The species should therefore be attributed to Gheyselinck in Weller (1944). A brief history of the holotype is presented. The specimen, "which is preserved in the University of Amsterdam, had been obtained from Ward’s Scientific Establishment about twenty years before [the time of Gheyselinck’s manuscript] and was originally labeled "*Phillipsia sangamonensis*, Pennsylvanian, Wichita, Kansas.""

The specimen is "identical in form and preservation to numerous specimens that I have examined from southern Kansas, particularly from the Florena shale near Grand
Summit, Cowley County, and from the Eskridge shale in Greenwood County, which I had described in manuscript under another name."

The new species *Cheiropyge kansasensis* is described from the "top of Haskell Limestone (Lower Permian), Leavenworth [sic; should read Leavenworth] County, about 15 miles north of Lawrence, Kansas."


Species present in Pennsylvanian rocks of Kansas, Missouri, Nebraska, or Oklahoma that are listed and illustrated are *Ditomopyge scitula* and *D. lansingensis*.


Pennsylvanian trilobites listed include *Phillipsia major*, *P. missouriensis*, *P. nodocostatus*, and *Proetus longicaudus*.

Whittington, H. B. 1954. Two silicified Carboniferous
trilobites from west Texas. Smithsonian Miscellaneous Collections, 122(10):1-16.

The holotype of Griffithides morrowensis from the Brentwood Limestone of Sawney Hollow, Adair County, Oklahoma is reillustrated and reassigned as Paladin (Paladin) morrowensis.


Two specimens of Proetus longicaudus are reported from "a blue limestone near Madison, Greenwood County, Kansas." The locality, according the Edwin Walters, the collector, is "on the border of the Upper Carboniferous, the Permian and Cretaceous with an occasional indication of a Jurassic Age."


The new species Griffithidesolsoni is described from two complete specimens collected from the lower part of the Cherokee shale (Pennsylvanian) near Columbia, Missouri.

Trilobites are listed as having been found in the Beal and Oread limestones of Douglas and Shawnee counties (p. 21). A reconstruction of a trilobite (species indeterminate!) is on page 22.