

Conodonts and Stratigraphy of the Meramecian Stage (Upper Mississippian) in Kansas

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Plates

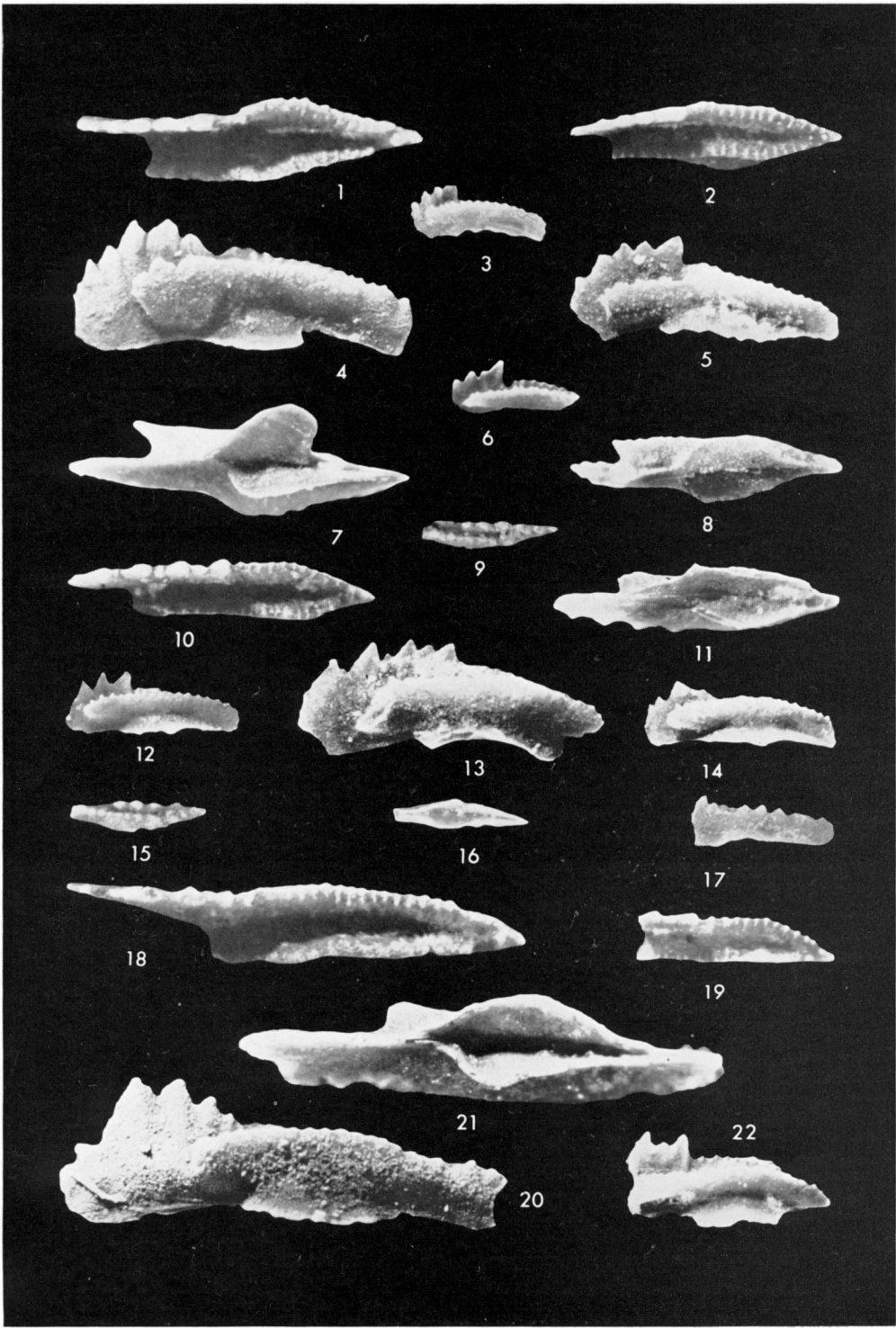
Explanation of Plate 1

All figures X about 35

Conodonts from the St. Louis Limestone in Kansas.

Figure

- 1, 4, 7. *Cavusgnathus characta* Rexroad. 1, Oral view; 4, lateral view; 7, aboral view; Core 1, 5,401 ft (KUMIP 1,800,222). St. Louis Limestone.
- 2, 5, 6, 8. *Cavusgnathus unicornis* Youngquist and Miller. 2, Oral view; 5, lateral view; 8, aboral view; Core B, 5,631 ft (KUMIP 1,800,116); 6, lateral view, Core B, 5,657 ft (KUMIP 1,800,332). St. Louis Limestone.
- 3, 12. *Cavusgnathus regularis* Youngquist and Miller. 3, Lateral view, Core A, 6,789 ft (KUMIP 1,800,080); 12, lateral view, Core B, 5,651 ft (KUMIP 1,800,115). St. Louis Limestone.
- 9, 15-17. *Spathognathodus* n. sp. 9, Oral view, Core A, 6,752 ft (KUMIP 1,800,082); 15, oral view; 16, aboral view; 17, lateral view; Core A, 6,752 ft (KUMIP 1,800,333). St. Louis Limestone.
- 10, 11, 13. *Cavusgnathus* sp. 10, Oral view; 11, aboral view; 13, lateral view, Core C, 4,826-4,828 ft (KUMIP 1,800,141). St. Louis Limestone.
- 14, 18, 20, 21. *Cavusgnathus convexa* Rexroad. 14, Lateral view, Core B, 5,707 ft (KUMIP 1,800,105); 18, oral view; 20, lateral 21, aboral view; Core M, 1,762 ft (KUMIP 1,800,266). St. Louis Limestone.
- 19, 22. *Cavusgnathus alta* Harris and Hollingsworth. 19, Oral view; 22, lateral view; Core B, 5,697 ft (KUMIP 1,800,114). St. Louis Limestone.



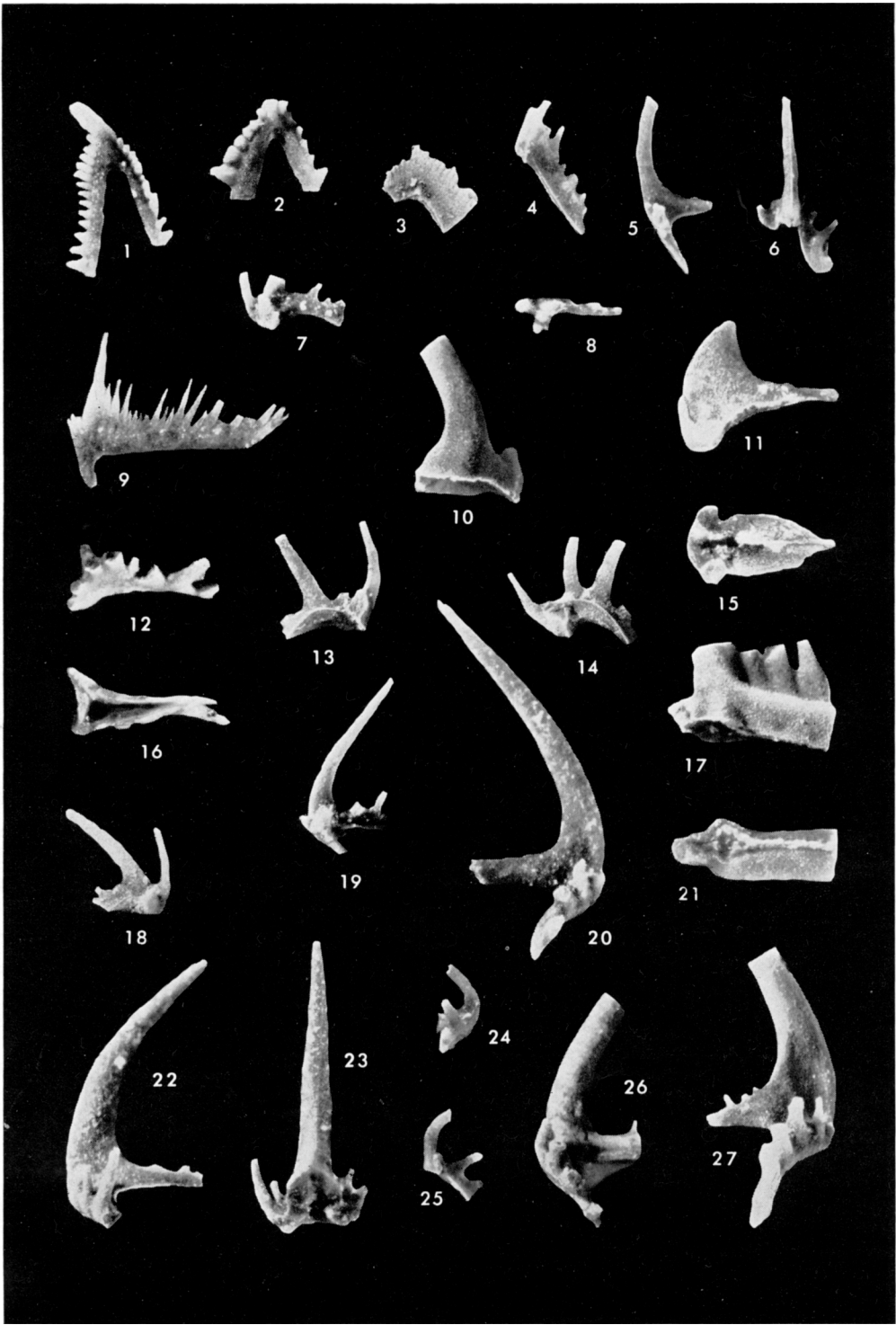
Explanation of Plate 2

All figures X about 35

Conodonts from the Warsaw, Salem, and St. Louis limestones in Kansas.

Figure

1. *Apatognathus? porcata* (Hinde). Inner-lateral view, Core B, 5,707 ft (KUMIP 1,800,104). St. Louis Limestone.
- 2, 4. *Apatognathus? gemina* (Hinde). 2, Inner-lateral view, Core A, 6,793 ft (KUMIP 1,800,076); 4, inner-lateral view, Core C, 4,761 ft (KUMIP 1,800,136). St. Louis Limestone.
3. *Apatognathus? n. sp.* A Rexroad and Collinson. Inner-lateral view, Core C, 4,981-4,991 ft (KUMIP 1,800,133). Salem Limestone.
- 5, 6. *Hibbardella ortha* Rexroad. 5, Lateral view; 6, posterior view; Core N, 1,667 ft (KUMIP 1,800,286). St. Louis Limestone.
- 7, 8, 18. *Ligonodina n. sp.* 7, Inner-lateral view; 8, oral view; Core B, 5,657 ft (KUMIP 1,800,117); 18, inner-lateral view, Core A, 6,755 ft (KUMIP 1,800,083). St. Louis Limestone.
9. *Hindeodelloides bicristatus* Huddle. Lateral view, Core B, 5,707 ft. Specimen lost. St. Louis Limestone.
10. *Lonchodina paraclarki* Hass. Outer-lateral view, Core K, 4,35-4,737 ft (KUMIP 1,800,244). Warsaw Limestone.
- 11, 15. *Hibbardella abnormis* Branson and Mehl. 11, Lateral view; 15, aboral view; Core O, 1,704 ft (KUMIP 1,800,306). Salem-lower St. Louis limestones.
- 12, 16. *Lambdagnathus fragilidens* Rexroad. 12, Oral view; 16, aboral view; Core 1, 5,377 ft. Specimen lost. St. Louis Limestone.
- 13, 14. *Magnilaterella robusta* Rexroad and Collinson. 13, Posterior view, Core E, 5,672 ft (KUMIP 1,800,122); 14, posterior view, Core A, 6,793 ft (KUMIP 1,800,092). St. Louis Limestone.
- 17, 21. *Lonchodina paraclaviger* Rexroad. 17, Lateral view; 21, aboral view; Core K, 4,742 - 4,744 ft (KUMIP 1,800,245). Warsaw Limestone.
- 19, 20. *Ligonodina levis* Branson and Mehl. 19, Inner-lateral view, Core C, 4,857-4,860 ft (KUMIP 1,800,143); 20, Inner-lateral view, Core B, 5,707 ft (KUMIP 1,800,109). St. Louis Limestone.
- 22, 23. *Hibbardella fragilis* (Rexroad). 22, Inner-lateral view; 23, posterior view; Core I, 5,43 ft (KUMIP 1,800,213). Salem-lower St. Louis limestones.
- 24, 25. *Ligonodina sp. A*. 24, Inner-lateral view; 25, posterior view; Core B, 5,697 ft (KUMIP 1,800,121). St. Louis Limestone.
- 26, 27. *Ligonodina roundyi* Hass. 26, Inner-lateral view, Core 1, 5,379 ft (KUMIP 1,800,231); 27, inner-lateral view, Core B, 5,707 ft (KUMIP 1,800,110). St. Louis Limestone.



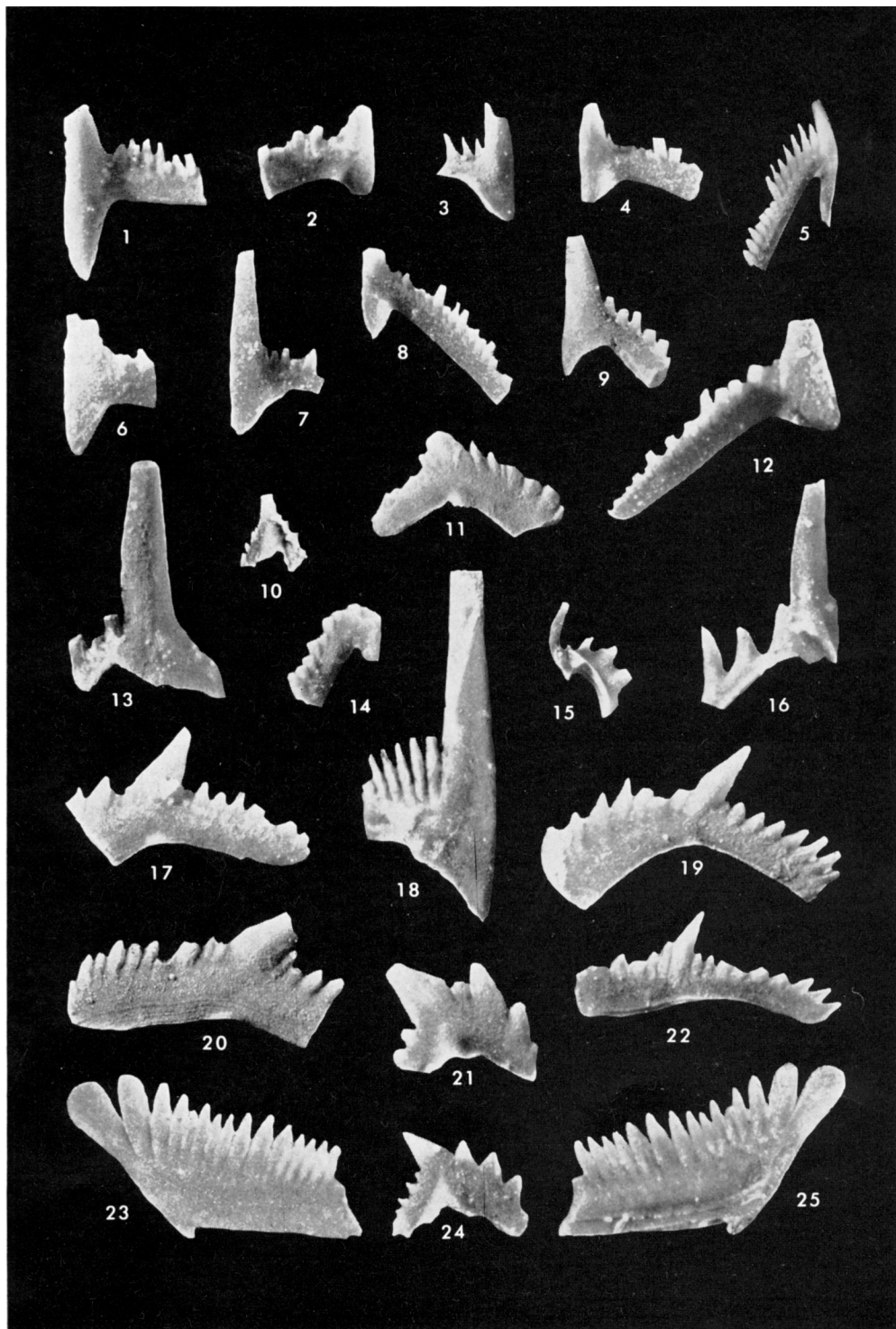
Explanation of Plate 3

All figures X about 35

Conodonts from the Warsaw, Salem, and St. Louis limestones in Kansas.

Figure

1. *Neoprioniodus ligo* (Hass). Lateral view, Core N, 1,662 ft (KUMIP 1,800,290). St. Louis Limestone.
2. *Neoprioniodus acampylus* Rexroad and Collinson. Lateral view, Core F, 4,479 ft (KUMIP 1,800,190). Warsaw Limestone.
3. *Neoprioniodus* sp. cf. *N. cassilaris* (Branson and Mehl). Lateral view, Core K, 4,725 - 4,727 ft (KUMIP 1,800,246). Warsaw Limestone.
- 4, 12. *Neoprioniodus loxus* Rexroad. 4, Lateral view, Core F, 4,486-4,487 ft (KUMIP 1,800,192). Warsaw Limestone. 12, Lateral view, Core I, 5,436 ft (KUMIP 1,800,217). Salem Limestone.
5. *Neoprioniodus?* sp. Lateral view, Core B, 5,707 ft (KUMIP 1,800,112). St. Louis Limestone.
6. *Neoprioniodus varians* (Branson and Mehl). Lateral view, Core Nt, 1,767 ft (KUMIP 1,800,272). St. Louis Limestone.
- 7, 18. *Neoprioniodus tulensis* (Pander). 7, Lateral view, Core G, 4,324 ft (KUMIP 1,800,206). Warsaw Limestone. 18, Lateral view, Core I, 5,377 ft (KUMIP 1,800,232). St. Louis Limestone.
- 8, 14. *Neoprioniodus camurus* Rexroad. 8, Lateral view, Core F, 4,479 ft (KUMIP 1,800,191). Warsaw Limestone. 14, Lateral view, Core A, 6,786 ft (KUMIP 1,800,093). St. Louis Limestone.
9. *Neoprioniodus roundyi* (Hass). Lateral view, Core A, 6,754 ft (KUMIP 1,800,095). St. Louis Limestone.
10. *Synprioniodina laxilabrum* Rexroad and Collinson. Lateral view, Core K, 4,772-4,774 ft (KUMIP 1,800,252). Warsaw Limestone.
11. *Ozarkodina curvata* Rexroad. Lateral view, Core F, 4,487 ft (KUMIP 1,800,195). Warsaw Limestone.
- 13, 16. *Neoprioniodus? inclinatus* (Hass). 13, Lateral view, Core O, 1,707 ft (KUMIP 1,800,303); 16, lateral view, Core K, 4,729 ft (KUMIP 1,800,249). Warsaw Limestone.
15. *Neoprioniodus? concavus* (Ulrich and Bassler). Lateral view, Core N, 1,665 ft (KUMIP 1,800,294). St. Louis Limestone.
- 17, 20. *Ozarkodina compressa* Rexroad. 17, Lateral view, Core 11, 5,710 ft (KUMIP 1,800,113). St. Louis Limestone. 20, Lateral view, Core F, 4,490-4,495 ft (KUMIP 1,800,194). Warsaw Limestone.
19. *Ozarkodina roundyi* (Hass). Lateral view, Core G, 4,338 ft (KUMIP 1,800,207). Warsaw Limestone.
- 21, 24. *Ozarkodina* sp. cf. *O. laevipostica* Rexroad and Collinson. 21, Lateral view, Core F, 4,472 ft (KUMIP 1,800,196); 24, lateral view, Core F, 4,488-4,491 ft (KUMIP 1,800,334). Warsaw Limestone.
22. *Ozarkodina recta* Rexroad. Lateral view, Core B, 5,651 ft (KUMIP 1,800,125). St. Louis Limestone.
- 23, 25. New genus?, sp. 23, Outer-lateral view; 25, Inner-lateral view; Core M, 1,754 ft (KUMIP 1,800,275). St. Louis Limestone.



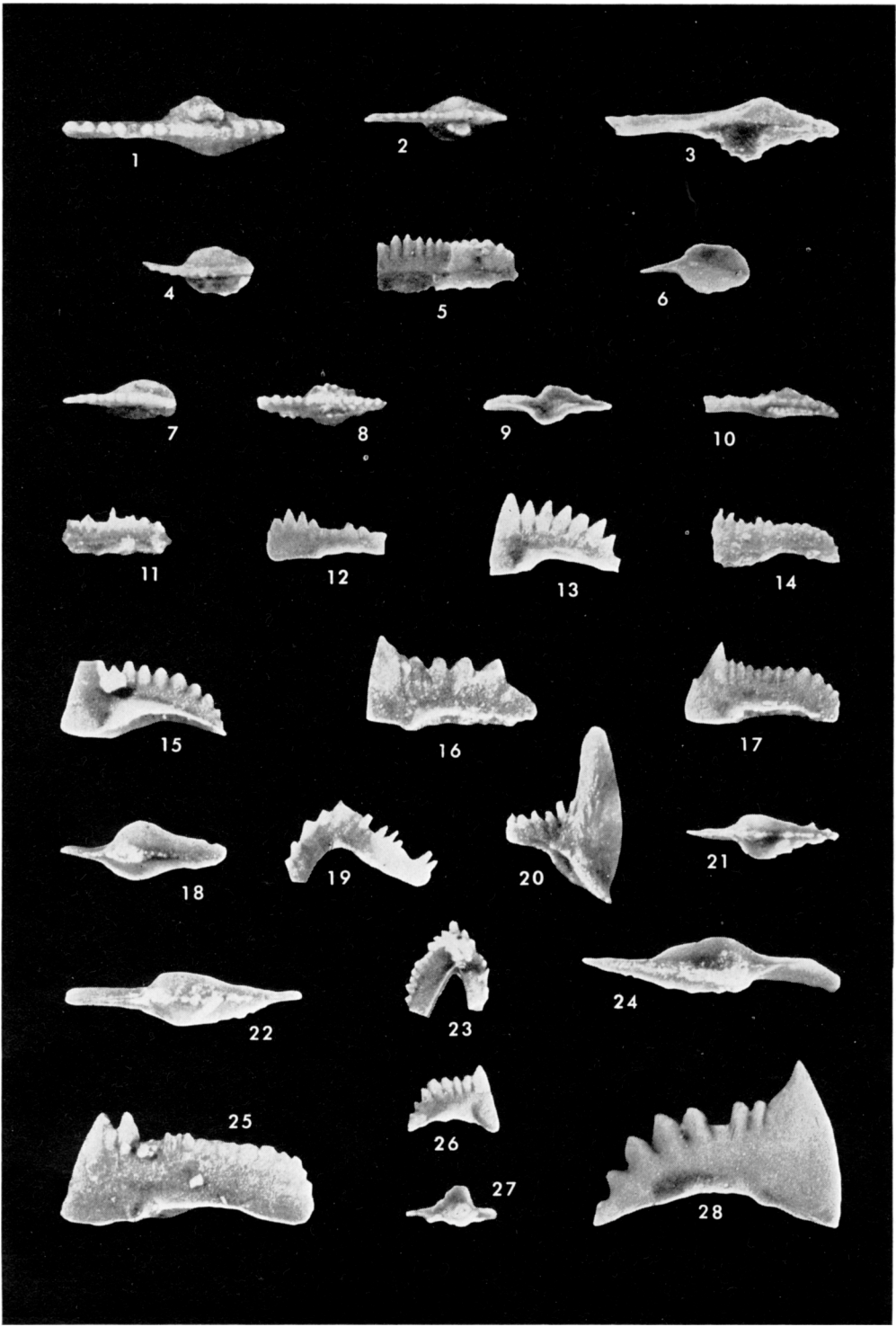
Explanation of Plate 4

All figures X about 35

Conodonts from the Warsaw and St. Louis limestones in Kansas.

Figure

- 1-3, 5. *Gnathodus texanus* Roundy. 1, Oral view; 3, aboral view; Core G, 4,327 ft (KUMIP 1,800,202); 2, oral view; 5, lateral view; Core K, 4,717-4,719 ft (KUMIP 1,800,240). Warsaw Limestone.
- 4, 6, 7. *Gnathodus commutatus* (Branson and Mehl). 4, Oral view; 6, aboral view; Core A, 6,788 ft (KUMIP 1,800,084). 2, Oral view, Core A, 6,789 ft (KUMIP 1,800,335). St. Louis Limestone.
- 8-10, 14. *Gnathodus girtyi?* Hass. 8, Oral view; 9, aboral view, Core B, 5,657 ft (KUMIP 1,800,119); 10, oral view; 14, lateral view, Core A, 6,755 ft (KUMIP 1,800,085). St. Louis Limestone.
11. *Spathognathodus campbelli* Rexroad. Lateral view, Core B, 5,651 ft (KUMIP 1,800,127). St. Louis Limestone.
12. *Spathognathodus spiculus* Youngquist and Miller. Lateral view, Core A, 6,793 ft (KUMIP 1,800,102). St. Louis Limestone.
- 13, 15, 18. *Spathognathodus cristula* Youngquist and Miller. 13, Lateral view, Core 1, 5,395 ft (KUMIP 1,800,233); 15, lateral view; 18, aboral view; Core B, 5,663-5,668 ft (KUMIP 1,800,128). St. Louis Limestone.
16. *Spathognathodus penescitulus* Rexroad and Collinson. Lateral view, Core C, 4,930-4,946 ft (KUMIP 1,800,149). St. Louis Limestone.
- 17, 21, 22, 25. *Spathognathodus* sp. cf. *S. pulcher* (Branson and Mehl). 17, lateral view; 21, aboral view; Core C, 4,930-4,946 ft (KUMIP 1,800,150). St. Louis Limestone. 22, Aboral view; 25, lateral view; Core F, 4,490-4,495 ft (KUMIP 1,800,199). Warsaw Limestone.
19. *Ozarkodina curvata* Rexroad. Lateral view, Core A, 6,794 ft (KUMIP 1,800,098). St. Louis Limestone.
20. *Neoprioniodus tulensis* (Pander). Lateral view, Core 1), 4,494 ft (KUMIP 1,800,166). St. Louis Limestone.
23. *Apatognathus? porcata* (Hinde). Inner-lateral view, Core A, 6,788 ft (KUMIP 1,800,336). St. Louis Limestone.
- 24, 28. *Spathognathodus* n. sp.? 24, Aboral view; 28, lateral view; Core D, 4,582 ft (KUMIP 1,800,169). St. Louis Limestone.
- 26, 27. *Spathognathodus scitulus* (Hinde). 26, Lateral view; 27, aboral view; Core C, 4,857-4,862 ft (KUMIP 1,800,151). St. Louis Limestone.



Explanation of Plate 5

All figures X about 35

Conodonts from the Keokuk (Osagian), and Warsaw, Salem, and St. Louis limestones in Kansas.

Figure

- 1-9, 12-15. *Taphrognathus varians* Branson and Mehl. 1, Oral view; 3, lateral view; 5, aboral view; Core F, 4,490-4,495 ft (KUMIP 1,800,200); 2, Oral view; 4, lateral view; 6, aboral view; Core M, 1,779 ft (KUMIP 1,800,265); 9, Oral view; 13, aboral view; 14, lateral view; Core E, 4,574 ft (KUMIP 1,800,183). Warsaw Limestone. 7, Oral view; 8, aboral view; Core 1, 5,444 ft (KUMIP 1,800,220). Salem Limestone. 12, Oral view; 15, aboral view; Loc. P, 20 ft below top (KUMIP 1,800,327). Keokuk Limestone.
- 10, 11. *Taphrognathus* sp. 10, Oral view; 11, aboral view; Core C, 4,826 ft (KUMIP 1,800,153). St. Louis Limestone.

