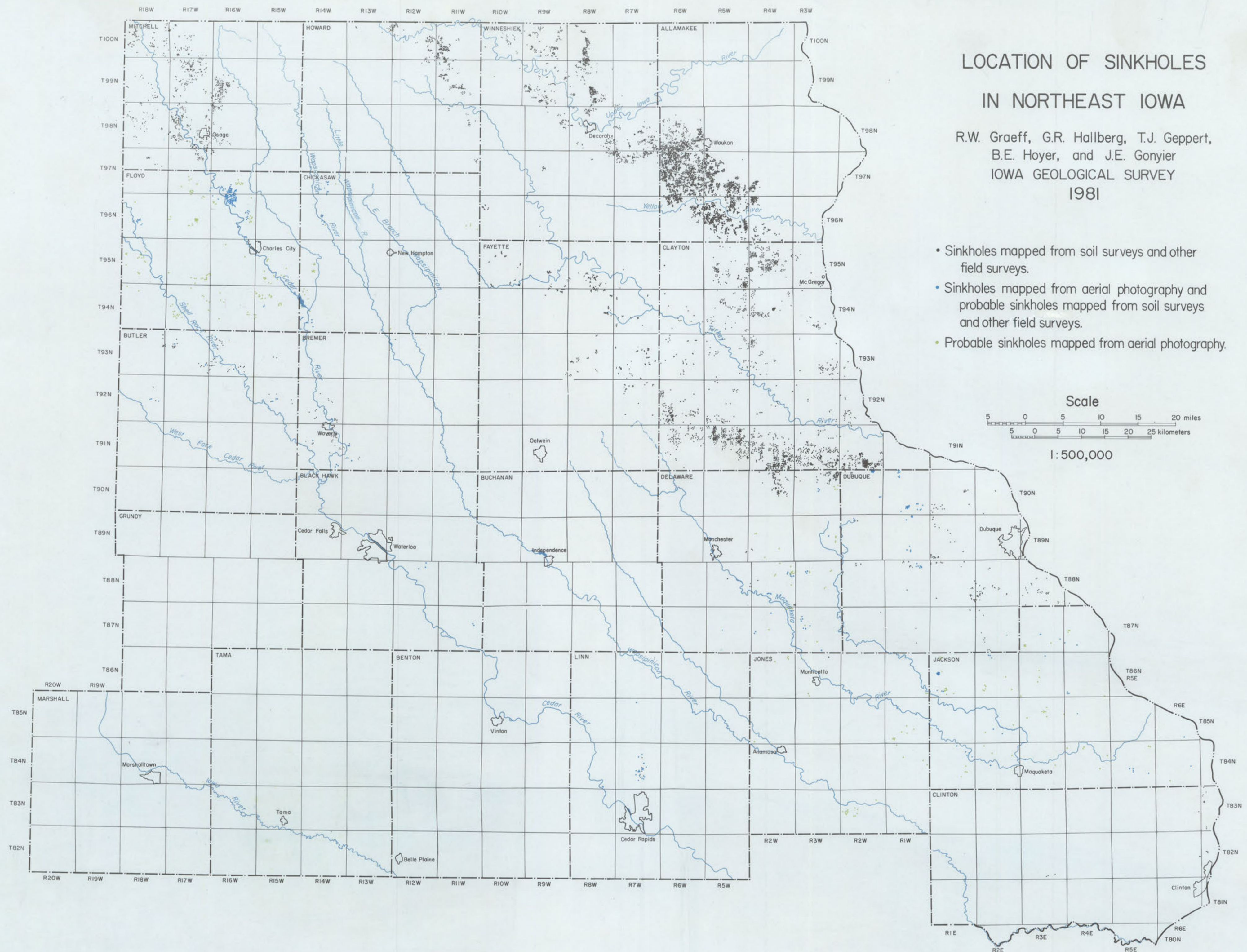


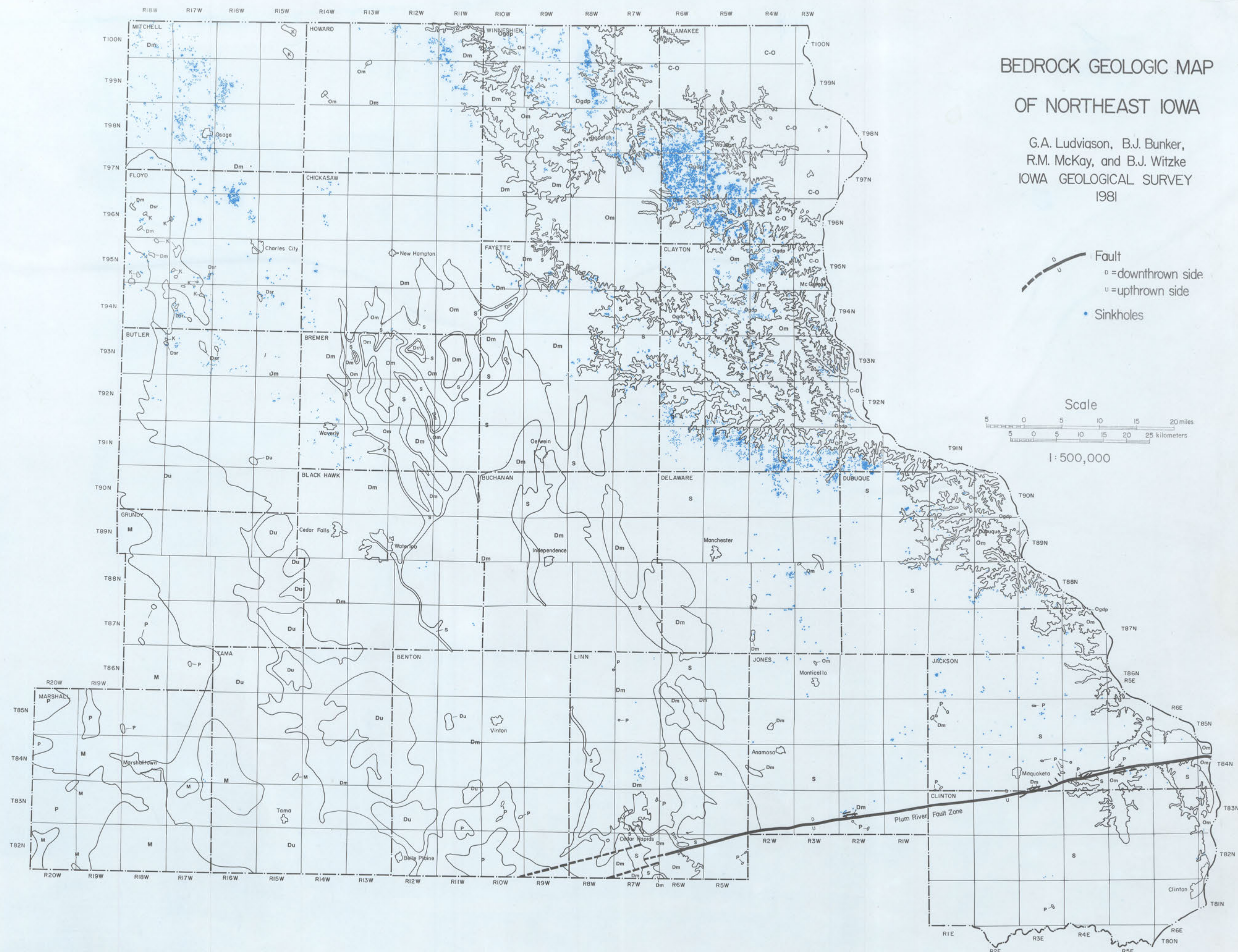


BEDROCK GEOLOGIC MAP OF NORTHEAST IOWA

G.A. Ludvason, B.J. Bunker,
R.M. McKay, and B.J. Witzke
IOWA GEOLOGICAL SURVEY
1981

Fault
▾ = downthrown side
▴ = upthrown side
• Sinkholes

Scale
0 5 10 15 20 miles
0 5 10 15 20 25 kilometers
1:500,000



System

Symbol: Formations or rock units — Description

Cretaceous

K — Cretaceous rocks Undifferentiated — sandstone, conglomerate, iron ore.

Pennsylvanian

P — Pennsylvanian Undifferentiated — dominantly clastic rocks; sandstone, siltstone, shale, some coal.

Mississippian

M — Mississippian Undifferentiated — limestone, dolomite, and shale; minor karst development.

Devonian

Du — Upper Devonian Undifferentiated,
Yellow Spring Group — shale and minor shaly carbonates.
Lime Creek Formation — shale and carbonates; minor karst development.

Dsr — Shell Rock Formation — limestone, dolomite and minor shale; minor karst development.

Dm — Middle Devonian Undifferentiated
Cedar Valley Formation — limestone, dolomite, minor shale; prominent karst development.
Wapsipinicon Formation — limestone, dolomite, and shale; minor karst development.

Silurian

S — Silurian Undifferentiated — dolomite, cherty dolomite, some limestone; prominent karst development.

Ordovician

Om — Maquoketa Formation — shale, limestone and dolomite; minor karst development in carbonate interval in lower portion of formation.

Ogdp — Galena Group — limestone and dolomite, cherty carbonates; extensive karst development.
Decorah Formation — limestone, shale and dolomite; minor karst development.
Platteville Formation — limestones and dolomite; minor karst development.

Ordovician and Cambrian

C-O — Cambrian/Ordovician Undifferentiated
St. Peter Sandstone — sandstone
Prairie du Chien Group — dolomite, cherty dolomite, sandstone and minor shale; minor karst development.

Upper Cambrian Undifferentiated
(Jordan Sandstone, St. Lawrence Formation, Lone Rock Formation, Wonewoc Formation) — sandstone, dolomite, and minor siltstone.

Karst-Susceptible Geologic Units

Map delineation shows the approximate distribution of bedrock units which exhibit surface karst features.

System

Symbol — comments

Jurassic

- J** — "Fort Dodge" gypsum beds — the surface of the gypsum exhibits solutional features which are filled with Quaternary sediments; no active sinkholes or solution cavities known.

Mississippian

- M** — Mississippian rocks undifferentiated; local karst development evident in Des Moines County (in the Burlington Limestone and St. Louis Limestone), Marshall County (Hampton Formation), and Humboldt County (Gilmore City Formation).

Devonian

- D** — Devonian rocks — majority of karst formed in the Cedar Valley Formation; minor areas of karst development in the Lime Creek, Shell Rock, and Wapsipicon Formations.

Silurian

- S** — Silurian rocks Undifferentiated — wide spread karst development.

Ordovician

- Om** — Maquoketa Formation — This formation is dominantly shale but karst features occur locally, developed in carbonate rocks present in the lower part of the formation; karst features may be related to stoping into karst developed in the underlying Galena Group.
- G** — Galena Group — extensive karst development; minor karst developed in lower portion of the Group (the Decorah and Platteville Formations).

Cambrian-Ordovician

- C-O** — Cambrian-Ordovician rocks undifferentiated — sandstones, dolomites, and minor shale units; karst features shown are developed in Prairie du Chien Group dolomites.

KARST FEATURES IN IOWA

G.R. Hallberg, M.J. Bounk, and T.J. Kemmis
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