

# Proceedings of the Iowa Academy of Science

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Volume 71 | Annual Issue

Article 45

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1964

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Lester P. Engelke

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### Recommended Citation

Engelke, Lester P. (1964) "Large Glacial Erratics in Northeast Iowa," *Proceedings of the Iowa Academy of Science*, 71(1), 280-283.

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## Large Glacial Erratics in Northeast Iowa

LESTER P. ENGELKE

*Abstract.* The location of large glacial erratics of gneiss and granite in northeast Iowa, specifically in the tri-county area of Bremer-Fayette-Chickasaw counties is described. Discussed are the possible origin, size, location, detectability on survey photos, and some historical features. Action to provide for protection of these glacial relics against destruction is urged.

In a recent communication from Paul M. Tilden, editor of the *National Parks Magazine*, concerning the Ice Age National Scientific Reserve, which was discussed in the August 1963 issue, he wrote: "I was most interested to hear of your plea before the geology section of the Iowa Academy of Science in behalf of at least a few of the glacial erratics in your area. I hope that the idea might actually take root." In the belief that a further study of these large erratics might contribute to their preservation for posterity, this study was undertaken by the writer.

The survey covers the area west of Highway 150, north of Highway 3, east of the Cedar River, and south of the Chickasaw-Howard county line in northeastern Iowa. No large erratics have been found north of Highway 24 east of U. S. 63, and only the most outstanding have been considered. Estimates based on above-ground dimensions indicate weights of the rocks may range from 100 to 1400 tons. Thousands of erratics, not counting many smaller ones piled along fences, are to be seen in a 50-mile drive about Sumner. Fifteen sizable and many small stones are visible west of Boyd in an area of about 80 acres.

A 2½-power glass will reveal such erratics on large-size aerial survey photos. In appearance they suggest pearls set in a piece of jewelry, with a dark fringe indicating either surrounding brush or shadow from the rock. However, it takes experience to appreciate their size and shape. Objects such as small build-

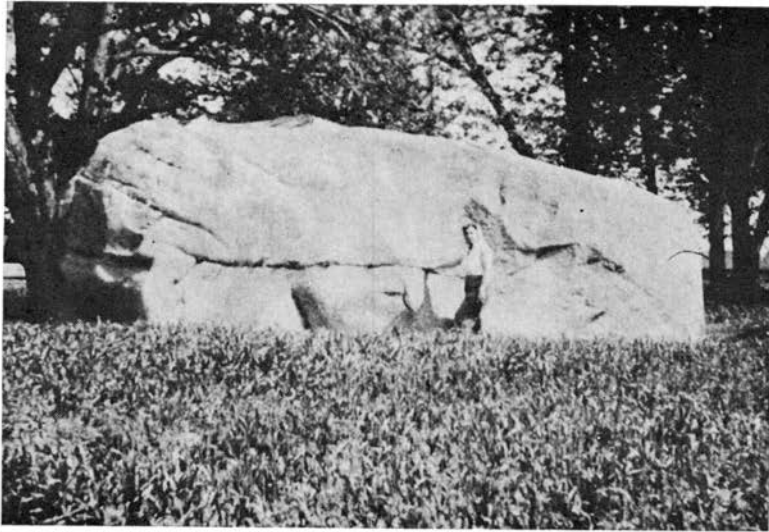


Figure 1. Largest rock in survey, 38' x 59' x 9'.

ings, forage piles, etc., generally are ringed with a white fringe, indicating animal or human traffic. Sandy spots, bare spots, pits and ponds usually have "fuzzy" edges, trees and brush are dark.

The area considered is tear-drop in outline, trending N. W. — S. E. From St. Peter's Rock, located about 7 miles N. N. W. of New Hampton, to a point southeast of Sumner, the longitudinal axis of the area of distribution is N. W.—S. E.; along the southern edge the boundary is E. — W.

These giant erratics are found only on higher terrain. None was found within a mile of the major streams of the area, the Cedar, Wapsipinicon, and Crane-Turkey rivers.

An engineer of the ASC office at New Hampton stated his experience has revealed that more of a rock occurs below the surface than above. An ovoid boulder about 6 x 10 ft., which a highway crew had removed on U.S. 3 a mile east of the Fayette County line had a soil line about two-thirds up from the bottom. to get rid of a large boulder by burial, reported he had dug down 18 feet, and still lacked 2 feet of reaching the bottom of the rock, which had 6 ft. exposed.

P. K. Sims, director of the Minnesota Geological Survey, indicated these boulders probably came from the Montevideo region of the Minnesota River Valley. Erosion incident to the 250-mile transport by ice may in part account for the well-rounded shapes of these gneiss fragments.

Investigators of the future are cautioned to keep in mind that the numerous subsurface pockets of small erratics to be

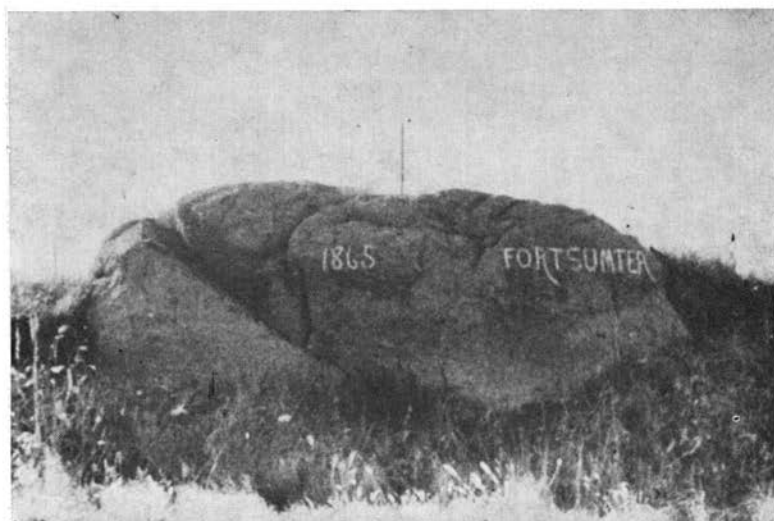


Figure 2. Pilot Rock where early settlers met their postman. Here settlers learned of the fall of Ft. Sumter.

found in this area may not be glacial deposits, but instead are rocks buried by landowners to dispose of those gleaned from the fields.

Some of the boulders are associated with local legends, as indicated in the descriptions included in Table 1.

A plea is here made for geologists and friends of nature to

Table 1. Location of erratics

County	Location	Size	Comments
Chickasaw	T.96N, R.13W., Sec. 3	20'x25'x17'	St. Peters Rock. Fig. 1.
Fayette	T.94N, R.12W., Sec. 33	18'x21'x10'	Group of 9 rocks
	T.94N, R.11W., Sec. 36	14'x25'x11'	
	T.94N, R.10W., Sec. 21		
	T.93N, R.10W., Sec. 22	18'x21'x6'	
	T.93N, R.9W., Sec. 18	12'x24'x7'	
	T.93N, R.10W., Sec. 25	25'x30'x11'	
Bremer	Sec. 35	21'x21'x27'x7'	Triangular
	T.92N, R.10W., Sec. 4	11'x18'x11'	
	Sec. 8	10'x21'x9'	
	Sec. 7	10'x18'x10'	
	T.92N, R.11W., Sec. 29	18'x36'x8'	
	Sec. 29	18'x24'x7½'	
Butler*	Sec. 6	21'x42'x7'	Pioneer woman's burial site. Fig. 2.
	T.92N, R.13W., Sec. 19	38'x52'x9'	
	T.93N, R.13W., Sec. 6		
	Two mi. west. 1¼ mi. N. of Allison	21'x30'x12'	Three rocks Pilot Rock. Fig. 4.

\*A rock 2½ miles south of U. S. Highway 3 on the Kesley blacktop was used by early settlers as a meeting place with their postman. A small flag is maintained on the rock at all times.

urge conservation authorities and appropriate preservation societies to initiate steps to preserve these few remaining large glacial novelties of the ice age. They are becoming scarce, and once these few remaining specimens are destroyed they never can be replaced. The small area these remaining large glacial erratics occupy can well be spared from agriculture. Let us preserve them for posterity.

For their many courtesies while making this survey, I express my indebtedness to: Minnesota Department of Geology; those county officials responsible for the aerial survey pictures; County Engineer Otmar Zack of Butler County; those farmers who permitted me to cross their fields for the survey; those individuals who provided information on the legends and who gave other information; and those who assisted me with the survey.