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RESEARCH

Key to Wildlife's Future



RESEARCH

Key to Wildlife's Future

By Richard A. Bishop
Wildlife Research Biologist

Years ago when some wildlife species such as the buffalo, prairie chicken, beaver, elk and wild turkey were finding living conditions incompatible with the stress imposed by the white man's pressure and his needs for existence, early conservationists pushed for protection of some species through game laws. As man's progress in the field of technology blossomed, additional stresses were placed on many wildlife species in the form of mass loss of habitat. Plows turned the prairie sod, saws cut through

numerous timber stands and tile drained the many sloughs and potholes. Concern for the well being of wildlife mounted and from this original seed of concern sprouted state fish and game departments. Emphasis was first placed on the need for good game and fish laws and enforcement of these laws. However, early wildlife protectors soon realized that law enforcement was not the only answer and that the management of habitat and wildlife populations was essential. Thus the field of game management developed.

The need for more and more answers to complex wildlife problems was evident.

Research was needed to provide sound biological data for

← Spotlighting and capturing pheasants for transplanting.



wildlife management programs. Without data many programs would be needlessly wasting sportsmen's dollars while failing to provide benefits to game species.

How does research benefit wildlife and the hunter? Research often pinpoints the problem and opens new avenues to approaching it. Research has enabled biologists to better manage marshes, forests and agricultural land for better wildlife reproduction and survival. This results in healthy populations and more birds and animals available for the public to enjoy, provided the knowledge gained can be put into practice in the field. For example, evaluation of the point system for duck hunting may some day provide hunters with a more enjoyable method for waterfowl hunting while at the same time saving some waterfowl species. Research on Canada geese at Hudson Bay will hopefully aid in the building of a much larger Canada goose population to migrate through Iowa. Research on the transplanting of ruffed grouse, and reintroduction of the wild turkey and the giant Canada goose has provided new populations of these species for people to see and to hunt. Evaluation of land use practices on pheasants and quail have provided information that can be used to increase wildlife populations. In a few cases research can help keep some species from becoming extinct.

research teams

Wildlife research in Iowa operates under the team approach. This system enables the maximum efficiency. Biologists working together as a team meet the demand for more man power than can be provided by the individual researcher. Also the specific time table of some research allows biologists to plan a full schedule of activities. Additionally, approaches to a problem from more than one individual usually results in a better understanding of the problem and thus higher quality data. This organizational set up is hard to improve upon. A better distribution of the work load results and emphasis is more adequately placed in the areas of high priority.

Iowa's research program is conducted by a team of 8 highly trained research biologists.

The staff consists of a supervisor, a biometrician, and three two-man teams. Each two-man team is designated an area of statewide responsibility. They are (1) wetland game and furbearers, (2) upland game and (3) forest game. The biometrician is involved in the more complicated phases of data analysis (computers, etc.) and works with all three teams. The research supervisor is responsible for planning and coordinating all research activities and programs, including those involving outside agencies.

The major responsibilities of these biologists are:

1. To conduct field research projects to provide information needed for the better management of wildlife.
2. To serve as technical advisors to the commission and its staff on wildlife problems in their area of expertise.
3. To evaluate game popula-



Transporting live-trapped mallards for banding.

tion and hunter harvest data and recommend annual hunting regulations attune with healthy game populations.

4. To maintain the highest degree of knowledge possible in their respective specialties and put to use in helping develop statewide management programs for each wildlife species.

The forest game team conducts investigations and surveys on deer, squirrels, grouse, turkey and woodcock. The upland game biologists work on pheasant, quail, Hungarian partridge, rabbits and mourning doves. The third pair of researchers devote their time to all the species of ducks and geese, coot, snipe, rails, fox, coyote, muskrat mink, beaver, racoon, and other furbearers. The major goals of these six men are to collect and assemble data to enhance the management and status of each major species. The resulting benefits can produce more security for the game populations and more recreational benefits to the people who enjoy them.

Research projects, including some directly management oriented, currently in progress involved:

1. Life history study of the Iowa coyote in relation to man and livestock.

2. Movement and morality study of the red fox (just completed).

3. Re-establishment of the

giant Canada goose in northern Iowa.

4. A study of the Eastern Prairie Population of Canada geese on the Hudson Bay lowlands (migrates through Iowa).

5. Evaluation of the point system regulations for harvesting ducks.

6. Mallard population study in northern Iowa.

7. Establishment of a breeding population of mallards in southern Iowa.

8. Evaluation of duck migrations and mortality rates by band return data.

9. Transplanting of ruffed grouse back into vacated parts of their native range.

10. Re-introduction of wild turkeys into their former Iowa range.

11. Evaluation of ruffed grouse habitat in relationship to grazing intensity.

12. Radio telemetry study of white-tail deer to evaluate home range, movements, and general behavior patterns.

13. Evaluation of survey data used in the setting of annual deer season regulations.

14. An evaluation of land use practices on pheasant reproduction in northern Iowa.

15. Investigation of the value of fire as wildlife management tool in southern Iowa.

16. Investigations of native grasses for nesting habitat for pheasant and quail.

17. A study of annual and long term quail population fluctuations in relation to land use.

18. A study of annual and long term pheasant population fluctuations in relation to land use.

19. Southeast Iowa pheasant range extension experiments.

20. Evaluation of roadside nesting habitat for pheasants.

21. Range expansion study of Hungarian partridge.

22. Evaluation of the federal set-aside acres program for wildlife.

23. Accelerated research investigations of mourning doves in Iowa.

24. Routine population and production surveys which are conducted by each group of biologists and used to set annual regulations, document population changes, and evaluate management efforts.

25. Improvement of survey techniques used to measure game populations and harvest.

Data provided from studies such as those listed aid tremendously in improving the future prospects of many wildlife populations, re-establishing populations of some species, and providing recreational harvest of biological surpluses.





NORTHWEST IOWA LAKES DISTRICT No. 1

IOWA CONSERVATIONIST

EDITORS NOTE: The following is a reprint of the fishing Iowa lakes article appearing in last month's CONSERVATIONIST. Please note corrections in the fish species and camping columns. Tear out this complete section, and use it as your '73 Iowa fishing guide.

MAP NO.	LAKE	OWNERSHIP*	LOCATION	WATER ACREAGE	TYPE OF LAKE†	FISH SPECIES IMPORTANCE		MOTOR PERMITTED**	BOAT RENTAL	BOAT RAMP	CAMPING
						Major	Minor				
1	Arrowhead	(S)	S. Side Lake View	38	P	LB	BL	N		•	
2	Badger	(C)	4½ mi. N. Fort Dodge	60	M	BL, LB	CC, NP	E	•	•	•
3	Beeds	(S)	3 mi. N.W. Hampton	130	M	CC, LB, CR, BL	NP, W	6	•	•	•
4	Blackbird Bend	(S)	8 mi. N.W. Onawa	490	O		LB, BL, CR, P, W, WB,	N			
5	Black Hawk	(S)	E. Edge Lake View	957	N	B, CC	CR, W	N	•	•	•
6	Blue	(S)	3 mi. W. Onawa	240	O	BL, NP	CR, LB	N	•	•	•
7	Briggs Woods	(C)	2 mi. S. Webster City	70	M	LB, CC		E		•	•
8	Browns	(S)	2 mi. W. Salix	200	O	BL, CC, NP	W, B, CR, LB	N	•	•	•
9	Center	(S)	3 mi. S.W. Spirit Lake	329	N	LB, B	BL, CR	N	•	•	•
10	Clear	(S)	S. Edge of Clear Lake	3643	N	WB, B, W, CR	M, NP, YB	N	•	•	•
11	Crystal	(S)	N. Edge Crystal Lake	261	N	B		N		•	•
12	Decatur Bend	(S)	4 mi. S.W. Onawa	800	O	LB, BL, CR	W, WB, NP, P	N		•	•
13	Diamond	(S)	2½ mi. N. Montgomery	166	N	B		N			
14	Dog Creek	(C)	2½ mi. S.E. Sutherland	30	M	CC, CR, LB, B	P	E		•	•
15	East Okoboji	(S)	E. Edge Okoboji	1875	N	B, W, CC	NP, P, M, CR, BL	N	•	•	•
16	East Twin	(S)	3 mi. E. Kanawha	193	N	B		N			
17	Eldred Sherwood	(C)	3 mi. N.E. Goodell	23	M	CC	LB, CR, BL	E			•
18	Elk	(S)	5 mi. S.W. Ruthven	261	N	B		N			
19	Five Island	(S)	1 mi. N. Emmetsburg	945	N	B, W	NP, P	N		•	
20	Gar (Lower)	(S)	½ mi. S. Arnolds Park	273	N	B		N			•
21	Gar (Upper)	(S)	Arnolds Park	37	N	B, BL	LB	N		•	
22	Hallet Pits	(S)	S. Edge Lake View	20	P	LB, BL	CC	E			
23	High	(S)	6 mi. E. Wallingford	467	N	B	W	N	•	•	
24	Ingham	(S)	6 mi. E. Wallingford	421	N	B, P	W, LB	N	•	•	
25	Iowa	(S)	6 mi. N. Armstrong	308	N	B		N		•	
26	Lake Cornelia	(S)	4½ mi. N.E. Clarion	273	N	B	W, CR, LB	N		•	•
27	Little Spirit	(S)	4 mi. N.W. Orleans	214	N	B, W, LB	NP, P, CR	N			
28	Little Wall	(S)	1½ mi. S. Jewell	273	N	CR, B	NP, LB	N	•	•	•
29	Lizard Lake	(S)	7 mi. S.W. Gilmore City	268	N	B		N			•
30	Lost Island	(S)	3 mi. N. Ruthven	1260	N	B, W	CR	N	•	•	•
31	Louisville Bend	(S)	5 mi. S.W. Onawa	1180	O	CC, LB, WB, CR	P, W	N			
32	Mill Creek	(S)	1 mi. E. Paullina	28	M	LB, BL	P	E			•
33	Minnewashta	(S)	½ mi. S. Arnolds Park	126	N	B	W, NP, CR	N	•	•	
34	Morse	(S)	4 mi. W. Belmond	108	N	B		N			
35	North Twin	(S)	4 mi. N. Rockwell City	569	N	CC, CR, W	B, NP	N	•	•	•
36	Park Pits	(C)	2 mi. S. Correctionville	14	M	LB, CC		E			•
37	Pickeral	(S)	7 mi. N.W. Marathon	176	N	B		N			

(Continued)

*Ownership: (F) Federal, (S) State, (C) County, (M) Municipal

†Type of Lake: (P) Pit, (N) Natural, (M) Man-Made, (O) Oxbow

**Motor Permitted: (O) No Motor Allowed, (N) No Size Limit, (6) 6 H.P., (E) Electric Motors

FISH SPECIES B - Bullhead BC - Blue Catfish BL - Blugill, Sunfish CC - Channel Catfish CR - Crappie
LB - Largemouth Bass M - Musky NP - Northern Pike P - Yellow Perch SB - Smallmouth Bass
W - Walleye, Sauger WB - White Bass

NORTHWEST IOWA LAKES (Continued)

MAP NO.	LAKE	OWNERSHIP*	LOCATION	WATER ACREAGE	TYPE OF LAKE†	FISH SPECIES IMPORTANCE		MOTOR PERMITTED**	BOAT RENTAL	BOAT RAMP	CAMPING
						Major	Minor				
38	Pine (Lower)	(S)	½ mi. E. Eldora	65	M	BL, CC		E	•	•	•
39	Pine (Upper)	(S)	½ mi. E. Eldora	101	M	CR, B, BL	NP, CC	6	•	•	•
40	Rice	(S)	2½ mi. S.E. Lake Mills	702	N	B	NP	N	•	•	
41	Silver	(S)	2½ mi. S.W. Lake Park	1058	N	NP, P, B	W	N	•	•	•
42	Silver	(S)	2 mi. W. Ayrshire	638	N	B	P	N	•	•	
43	Silver	(S)	1½ mi. N.W. Northwood	330	N	LB, NP	BL, B	N	•	•	•
44	Smith	(C)	3 mi. N. Algona	53	M	NP, B	CR, CC, BL, LB	E	•	•	•
45	Snyder Bend	(S)	5 mi. S.W. Salix	375	O	CR, WB CC	W, NP, LB	N	•	•	•
46	Spirit	(S)	1 mi. N. Spirit Lake	5684	N	P, W, SB, B	BL, CC NP, LB, CR	N	•	•	•
47	Storm	(S)	S. Edge of Storm Lake	3060	N	W, NP, CR, WB	CC, B	N	•	•	•
48	Swan	(C)	3 mi. S.E. Carroll	130	M	LB, B, CC	BL	6	•	•	•
49	Swan	(S)	1½ mi. N. Superior	371	N	B, NP	P	N	•	•	
50	Trumbull	(S)	6 mi. N.W. Ruthven	1190	N	NP, B	P	N	•	•	
51	Tuttle	(S)	3 mi. N.E. Dolliver	981	N	B	NP, W	N	•	•	•
52	Twelve Mile	(S)	5 mi. S.W. Wallingford	290	N	B		N	•	•	
53	Virgin	(S)	1½ mi. S. Ruthven	200	N	B		N	•	•	
54	West Okoboji	(S)	W. Edge Arnolds Park	3939	N	NP, SB, P, W	B, LB, BL, CR, M	N	•	•	•
55	West Swan	(S)	3 mi. S.E. Gruver	1038	N	B	NP	N	•	•	
56	West Twin	(S)	2 mi. E. Kanawha	109	N	B		N	•	•	
57	Winnebago Bend	(S)	5 mi. S.W. Sloan	555	O	CR, WB	LB, NP, W, CC	N	•	•	•
58	Winterfield Area	(C)	N. Edge Rock Valley	17	P	CC, LB		E	•	•	

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NORTHEAST IOWA LAKES
DISTRICT NO. 2

1	Backbone	(S)	4 mi. S.W. Strawberry Pt.	100	M	B	LB, BL, CR	6	•	•	•
2	Cedar Falls Res.	(M)	N. Edge Cedar Falls	30	M	CC, B	CR, BL	N	•	•	•
3	Fontana Mill	(C)	½ mi. S. Hazleton	60	M	CC, B	CR, BL, LB	E	•	•	•
4	Greene Impound.	(M)	Greene	35	M	CC, B	CR	E	•	•	
5	Hartwick Impound.	(M)	3 mi. W. Delhi	538	M	CC, B	LB, WB, CR, BL, W	N	•	•	•
6	Independence Imp.	(M)	Independence	700	M	CR, B, CC	LB, NP, BL	N	•	•	

(Continued)

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LB - Largemouth Bass M - Musky NP - Northern Pike P - Yellow Perch SB - Smallmouth Bass

W - Walleye, Sauger WB - White Bass

NORTHEAST IOWA LAKES (Continued)

MAP NO.	LAKE	OWNERSHIP*	LOCATION	WATER ACREAGE	TYPE OF LAKE†	FISH SPECIES IMPORTANCE		MOTOR PERMITTED**	BOAT RENTAL	BOAT RAMP	CAMPING
						Major	Minor				
7	Interstate Park	(C)	W. Edge Mitchell	140	M	CC, B	CR, BL	N		●	●
8	Lake Hendricks	(C)	½ mi. N.E. Riceville	50	M	B, CC	CR, BL, LB	E		●	●
9	Lake Meyers	(C)	3 mi. S.W. Calmar	38	M	CC, CR	BL, LB	E		●	●
10	Lake Oelwein	(M)	E. Edge Oelwein	23	M	B	LB, BL	N		●	
11	Nashua Impound.	(M)	Nashua	200	M	CC, B	BL, NP, LB, CR	N		●	
12	Quaker Mill Impoundment	(M)	N.E. Manchester	64	M	B	CR, LB, BL, CC	6		●	
13	Sabula North	(S)	W. Edge Sabula	115	M	CR, B	LB, NP, BL, CC	N		●	
14	Sabula South	(C)	S.W. Edge Sabula	260	M	CR, B	CC, LB, NP, BL	N		●	●
15	Silver Lake	(C)	S.E. Edge Delhi	30	M	LB, CC, BL		E			
16	Sweet Marsh	(S)	1 mi. E. Tripoli	965	M	B	LB, CR, BL, NP	E		●	

SOUTHEAST IOWA LAKES
DISTRICT NO. 3

1	Amber (Central Pk.)	(C)	2 mi. W. Center Jct.	25	M	CR, BL	CC, B, LB	E	●		●
2	Bob White	(S)	1 mi. W. Allerton	115	M	CR, BL	CC, B, LB	6	●	●	●
3	Brown Slough	(S)	7 mi. S.E. Russell	200	M	LB	BL	6		●	
4	Centerville Res.	(M)	S.W. Edge Centerville	200	M	LB, BL, CR	CC, B	6		●	
5	Chatfield	(C)	3 mi. N.W. Keokuk	30	M	LB, BL, CR	B, CC	E			
6	Colyn North	(S)	4 mi. S. Russell	100	M	LB	BL	6		●	
7	Colyn South	(S)	4 mi. S. Russell	200	M	LB	BL	6		●	
8	Coralville Res.	(F)	2½ mi. W. Solon	5000	M	CR	NP, CC	N	●	●	●
9	Diamond	(M)	1 mi. W. Montezuma	130	M	CR, BL, CC	LB	E			●
10	Ellis	(M)	1 mi. E. Chariton	110	M	CR, BL	LB	E		●	
11	Hannen	(C)	4 mi. S.W. Blairstown	45	M	BL, CC	LB, CR	E	●	●	●
12	Hickory Hills	(C)	7 mi. N. Dysart	72	M		LB, BL, CR, CC	E	●	●	●
13	Kent Park	(C)	2½ mi. W. Tiffin	30	M	CR, CC	LB, BL	E			●
14	Lacey-Keosauqua	(S)	Adjoins Keosauqua	30	M	CR, BL	CC, B, LB	E	●	●	●
15	Lake Darling	(S)	3 mi. W. Brighton	302	M	CR, CC, B	LB, BL	6	●	●	●
16	Lake Fisher	(M)	2 mi. N.W. Bloomfield	110	M	CR, CC	LB, BL, B	O			
17	Lake Geode	(S)	4 mi. S.W. Danville	205	M	LB, CR, BL	CC, W	6	●	●	●

Continued

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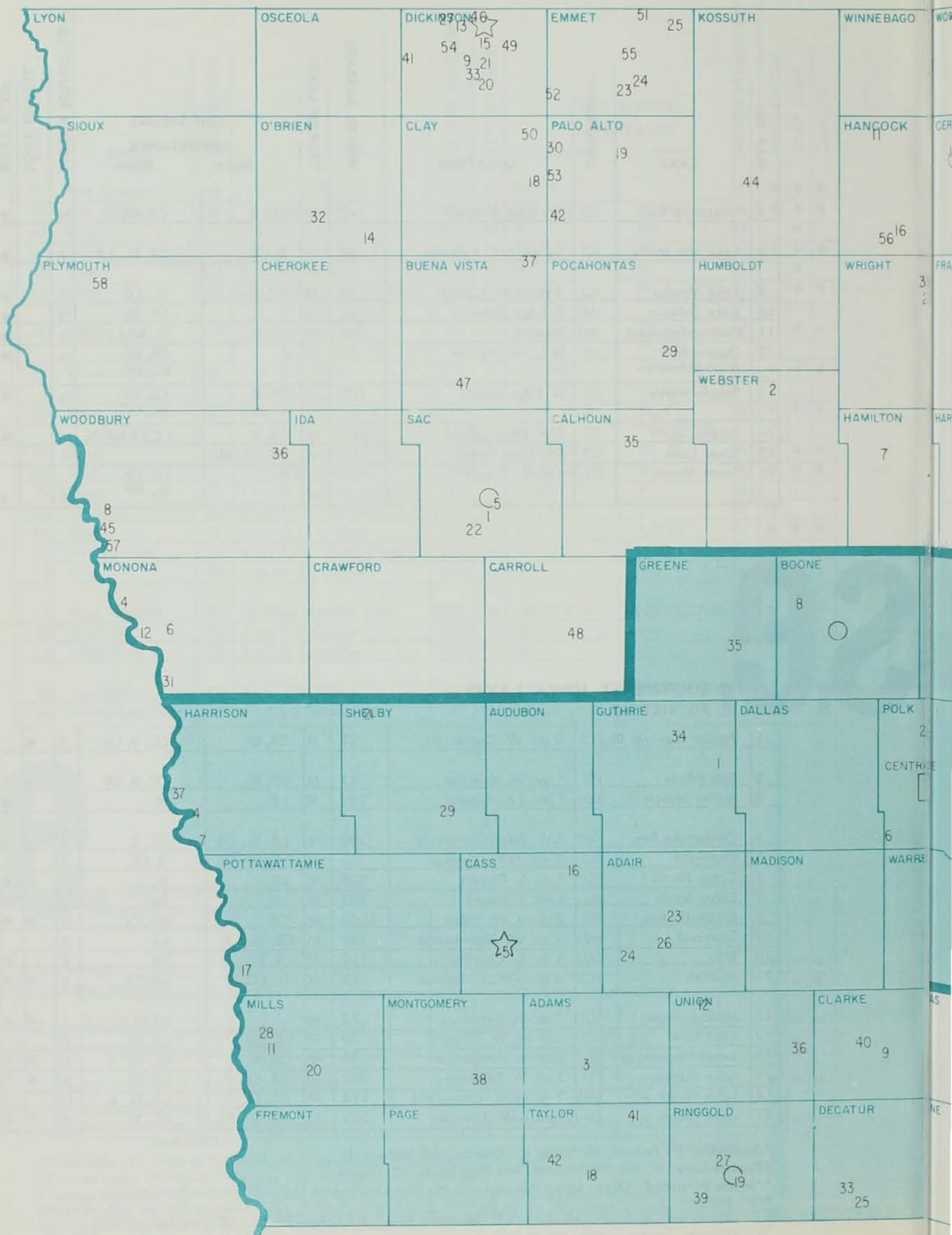
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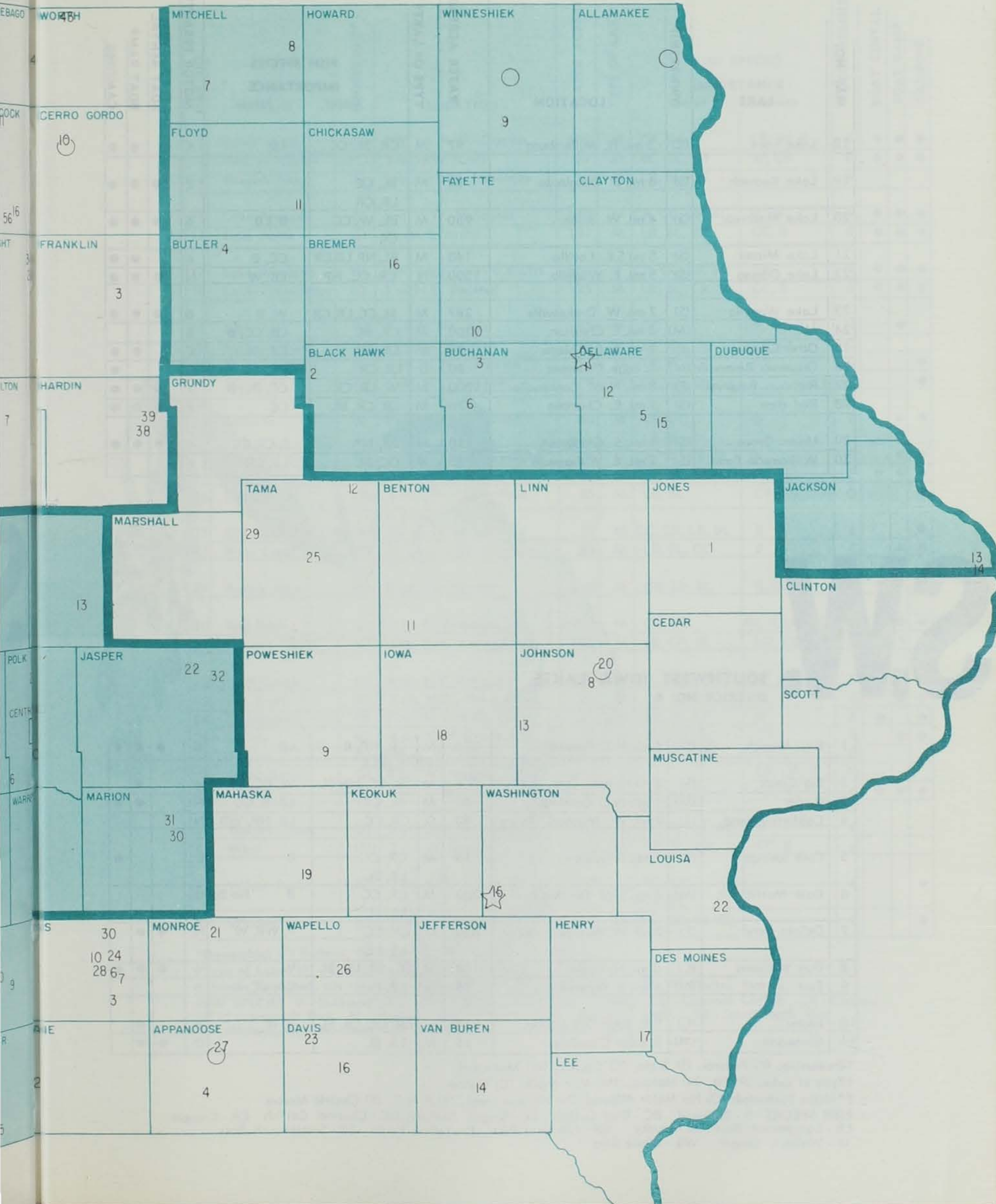
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SOUTHEAST IOWA LAKES (Continued)

MAP NO.	LAKE	OWNERSHIP*	LOCATION	WATER ACREAGE	TYPE OF LAKE†	FISH SPECIES IMPORTANCE		MOTOR PERMITTED**	BOAT RENTAL	BOAT RAMP	CAMPING
						Major	Minor				
18	Lake Iowa	(C)	5 mi. N. Millersburg	97	M	CR, BL, CC	LB	E		●	●
19	Lake Keomah	(S)	6 mi. E. Oskaloosa	82	M	BL, CC LB, CR		E	●	●	●
20	Lake Macbride	(S)	4 mi. W. Solon	950	M	BL, W, CC CR	B, LB	6	●	●	●
21	Lake Miami	(S)	5 mi S.E. Lovilla	140	M	BL, NP, LB, CR	CC, B	6		●	●
22	Lake Odessa	(S)	5 mi. E. Wapello	1500	N	CR, CC, NP	LB, W	N	●	●	●
23	Lake Wapello	(S)	7 mi. W. Drakesville	287	M	BL, CC, LB, CR	W, B	6	●	●	●
24	Morris	(M)	3 mi. E. Chariton	200	M	CR, BL	LB, CC, B	E			
25	Otter Creek	(C)	6 mi. N.E. Toledo	70	M	LB, CC	CR, BL	E		●	●
26	Ottumwa Reservoir	(M)	S. Edge Ottumwa	80	O	LB, CR	CC, BL	O			●
27	Rathbun Reservoir	(F)	8 mi. N.W. Centerville	11000	M	W, LB, CR	CC, BL, B	N	●	●	●
28	Red Haw	(S)	1 mi. E. Chariton	76	M	LB, CR, BL	CC	E	●	●	●
29	Union Grove	(S)	4 mi. S. Gladbrook	110	M	LB, NP	B, CR, CC	6	●	●	●
30	Williamson Pond	(S)	2 mi. E. Williamson	25	M	CC, BL	LB, CR	E			

SW.

SOUTHWEST IOWA LAKES DISTRICT NO. 4

1	Bays Branch	(S)	4 mi. N.E. Panora	270	M	CR, NP, B	LB	6	●	●	●
2	Big Creek	(S)	2 mi N. Polk City	866	M	CR, CC, LB, BL	W, BC, SB, M	6		●	
3	Binder	(M)	1 mi. N.E. Corning	60	M	BL, CR	LB, B, CC	N		●	●
4	California Bend	(S)	9 mi. W. Missouri Valley	90	O	CR, CC	LB, NP, WB	N			
5	Cold Springs	(C)	1 mi. S. Lewis	16	M	CR, CC LB, BL	B	E			●
6	Dale Moffit	(M)	6 mi. S.W. Des Moines	200	M	CR, CC LB, BL	B No Boats				
7	DeSoto Bend	(F)	5 mi. W. Missouri Valley	850	O	CR, CC LB, BL	P, WB, W	N	●	●	
8	Don Williams	(C)	5 mi. N. Ogden	160	M	CC, CR, LB, BL	W	6	●	●	●
9	East	(M)	1 mi. E. Osceola	15	M	LB, BL	CR, CC, B	0			
10	Easter	(C)	S.E. Edge Des Moines	228	M	CR, CC, LB, BL	B, W	6		●	
11	Glenwood	(M)	E. Edge Glenwood	15	M	LB, BL		O	●	●	

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SOUTHWEST IOWA LAKES (Continued)

MAP NO.	LAKE	OWNERSHIP*	LOCATION	WATER ACREAGE	TYPE OF LAKE†	FISH SPECIES IMPORTANCE		MOTOR PERMITTED**	BOAT RENTAL	BOAT RAMP	CAMPING
						Major	Minor				
12	Green Valley	(S)	2½ mi. N.W. Creston	400	M	CR, CC	LB, W, B	6	•	•	•
13	Hickory Grove	(C)	2 mi. S.W. Colo	99	M	BL, CC, LB	W, CR	E	•	•	•
14	Hooper Area	(S)	5½ mi. S.W. Indianola	13	M	LB, BL, CC		E			
15	Lake Ahquabi	(S)	5 mi. S.W. Indianola	140	M	CR, CC, LB, BL	B, W	6	•	•	•
16	Lake Anita	(S)	½ mi. S. Anita	187	M	LB, BL, CR	CC, B	6	•	•	•
17	Lake Manawa	(S)	S.W. Edge Council Bluffs	660	O	CR, CC, LB, BL	NP	N	•	•	•
18	Lake Three Fires	(S)	3 mi N.E. Bedford	125	M	LB, BL, CR	CC, B	6	•	•	•
19	Loch Ayr	(M)	1 mi N. Mt. Ayr	95	M	CC	CR, B, LB, BL	N		•	
20	Malvern Pond	(M)	W. Edge Malvern	10	M	LB, BL	CR, CC	O			
21	Manteno Pond	(C)	8 mi. N.W. Defiance	11	M	LB, BL, CC	CR	E			•
22	Mariposa	(C)	5 mi. N.E. Newton	19	M	CC, LB, BL	No Boats				•
23	Meadow	(S)	6 mi. N.E. Greenfield	40	M	CR, CC LB, BL	B	E		•	•
24	Morman Trail	(C)	1½ mi. S.E. Bridgewater	35	M	CR, CC, LB, BL	B	E		•	•
25	Nine Eagles	(S)	3½ mi. S.E. Davis City	80	M	LB, BL, CR	CC, B	E	•	•	•
26	Nodaway	(M)	3 mi. S.W. Greenfield	25	M	LB, BL	CR, CC	O			•
27	Old Reservoir	(M)	½ mi. N. Mt. Ayr	12	M	CC, CR, LB, BL	B	E			•
28	Pony Creek	(C)	3½ mi. N.W. Glenwood	83	M	LB, BL, CC	B	E		•	•
29	Prairie Rose	(S)	8 mi. S.E. Harlan	218	M	CR, LB, BL	B, CC	6	•	•	•
30	Red Rock	(F)	4 mi. N. Knoxville	8950	M	CR, CC	W, B, LB, NP	N		•	•
31	Roberts Creek	(C)	6 mi. N.E. Knoxville	300	M	LB, CR, BL	NP, CC, B	6		•	•
32	Rock Creek	(S)	4 mi. N.E. Kellogg	600	M	CC, BL, LB, CR	B	6	•	•	•
33	Slip Bluff	(C)	2 mi. N.W. Davis City	25	M	LB, BL, CC		E		•	•
34	Springbrook	(S)	7 mi. N. Guthrie Center	27	M	LB, BL, CR	B	E	•		•
35	Spring	(C)	4 mi. N.W. Grand Jct.	49	M	CC, LB, BL	CR	E		•	•
36	Thayer	(S)	½ mi. W. Thayer	11	M	LB, BL, CR	CC, B	E			
37	Tyson Bend	(S)	4 mi. W. Modale	75	O		LB, CR, W	N			
38	Viking	(S)	4 mi. E. Stanton	150	M	LB, BL, CR	CC, B	6	•	•	•
39	Walnut Creek	(S)	5 mi. S.W. Mt. Ayr	60	M	CR, CC, LB, BL	B	E			
40	West	(M)	2 mi. W. Osceola	175	M	LB, BL, CR	CC, B	E			
41	Wilson Park	(C)	7 mi. S.W. Lennox	15	M	CR, CC LB, BL		E			•
42	Windmill	(C)	6 mi. E. New Market	25	M	CR, CC, LB, BL		E			•

*Ownership: (F) Federal, (S) State, (C) County, (M) Municipal

†Type of Lake: (P) Pit, (N) Natural, (M) Man-Made, (O) Oxbow

**Motor Permitted: (O) No Motor Allowed, (N) No Size Limit, (6) 6 H.P., (E) Electric Motors

FISH SPECIES B - Bullhead BC - Blue Catfish BL - Blugill, Sunfish CC - Channel Catfish CR - Crappie
LB - Largemouth Bass M - Musky NP - Northern Pike P - Yellow Perch SB - Smallmouth Bass
W - Walleye, Sauger WB - White Bass

SURVEYING

GROUSE

On a spring morning in northeast Iowa, through the din of crows calling, squirrels and song birds chattering, and frogs croaking, the occasional muffled "drumming" of a ruffed grouse thumps across the forested valley. On such a not-so-peaceful spring morning, this noise may pass unnoticed unless care is taken to listen closely.

For about two weeks in April, several Iowa Conservation Commission biologists and aids crawl out of bed at about four a.m. to run the annual grouse drumming survey routes. These routes are run each year with the same listening stops. This affords the surveyors a relative basis to compare populations with previous years. The routes are run along many of the heavily timbered roads in extreme northeast Iowa and every year a few new routes are initiated.

When running the route a man follows a map, stopping at predestined intervals. At each, he quietly steps out of the car, walks

a short distance, checks his watch and then listens intently for a four minute span. He must remain motionless, mentally block out all other noises and concentrate on the drumming. Of course drummings within 100 yards of the surveyor are easily detected, but more distant birds are barely audible. The number of drummings heard as well as the estimated number of birds (the same bird may drum twice or more during the 4 minutes) are recorded.

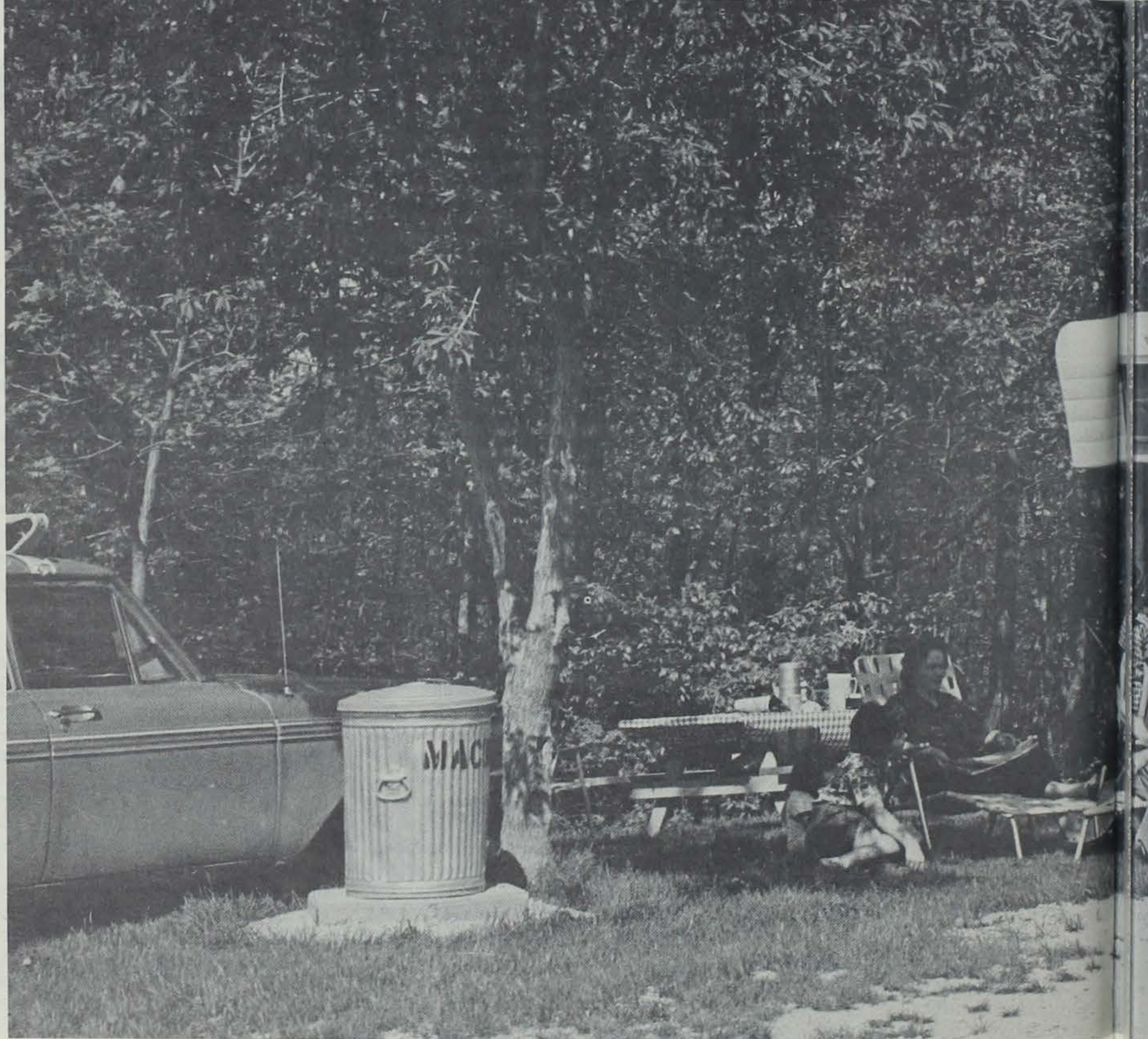
Although 4 a.m. awakenings may seem unpleasant, the surveyor often is rewarded with pleasant experiences . . . a doe pausing by a woodland stream, a wild turkey gobbling just over the bluff, or merely the sweet smells of meadow grasses sparkling in the first testimony of the morning sun.

It's difficult to imagine how the male grouse actually produces all that racket. For a long time it was suspected that he pounded hollow logs with his wings to produce the drumming. However

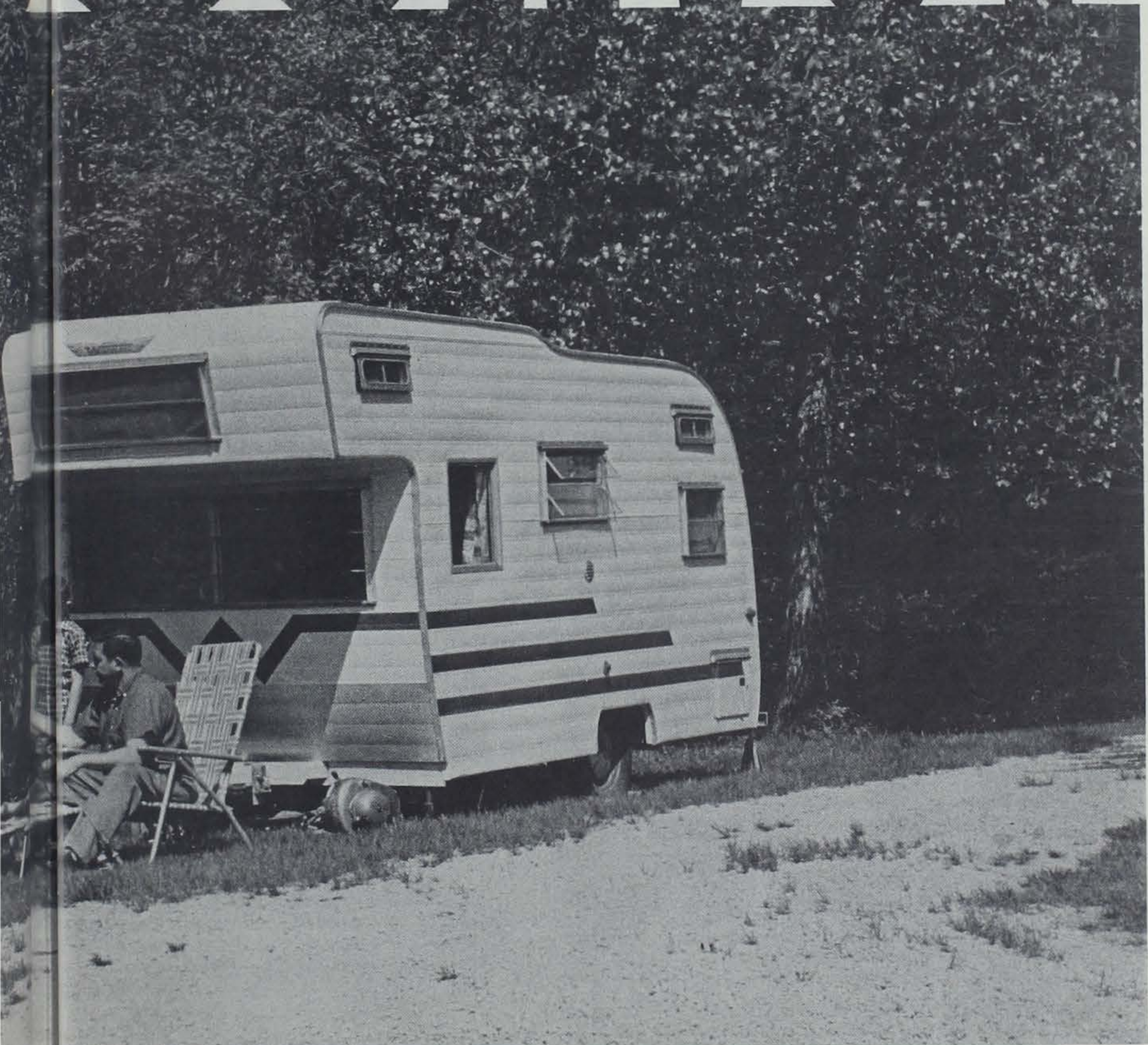
grouse may drum on rock outcroppings or even mounds (he prefers elevation) which rules out the old theory. Now it is agreed that the noise is caused by the vacuum produced by cupped wings. As the grouse rapidly lifts his wings, air rushes in to fill the void causing a muffled thumping sound. The vigorous roll at the end of each "drumming" accounts for the name.

Why survey the grouse drummings? Drumming counts are the best way to estimate populations and compare them to previous years' records. This enables biologists to determine population trends in order to better manage the birds, establish seasons and limits, etc. Considerable time, effort and money have been spent to bring this bird — considered by many as the classic game bird — back into a healthy, harvestable population in Iowa. The surveys and research oriented studies will insure the presence of the ruffed grouse as long as the forested habitat remains.

CAMPING



AWAY





What are you the camper willing to pay for a campsite in a park? Do you prefer having electrical outlets, showers and other conveniences available at the campgrounds? Nearly 4,000 campers around the U. S. were asked these and other questions about their favorite pastime. A wide variety of incomes, job classifications, and age groups within the camping fraternity are represented in this poll.

The survey, compiled by Glenn and Martha Kerr, National Campsite Directors of the National Campers and Hikers Association includes a breakdown by states as well as the national totals. The results indicate: (1) how the total 4,000 campers (nationwide) responded, and (2) how Iowa campers answered the questions.

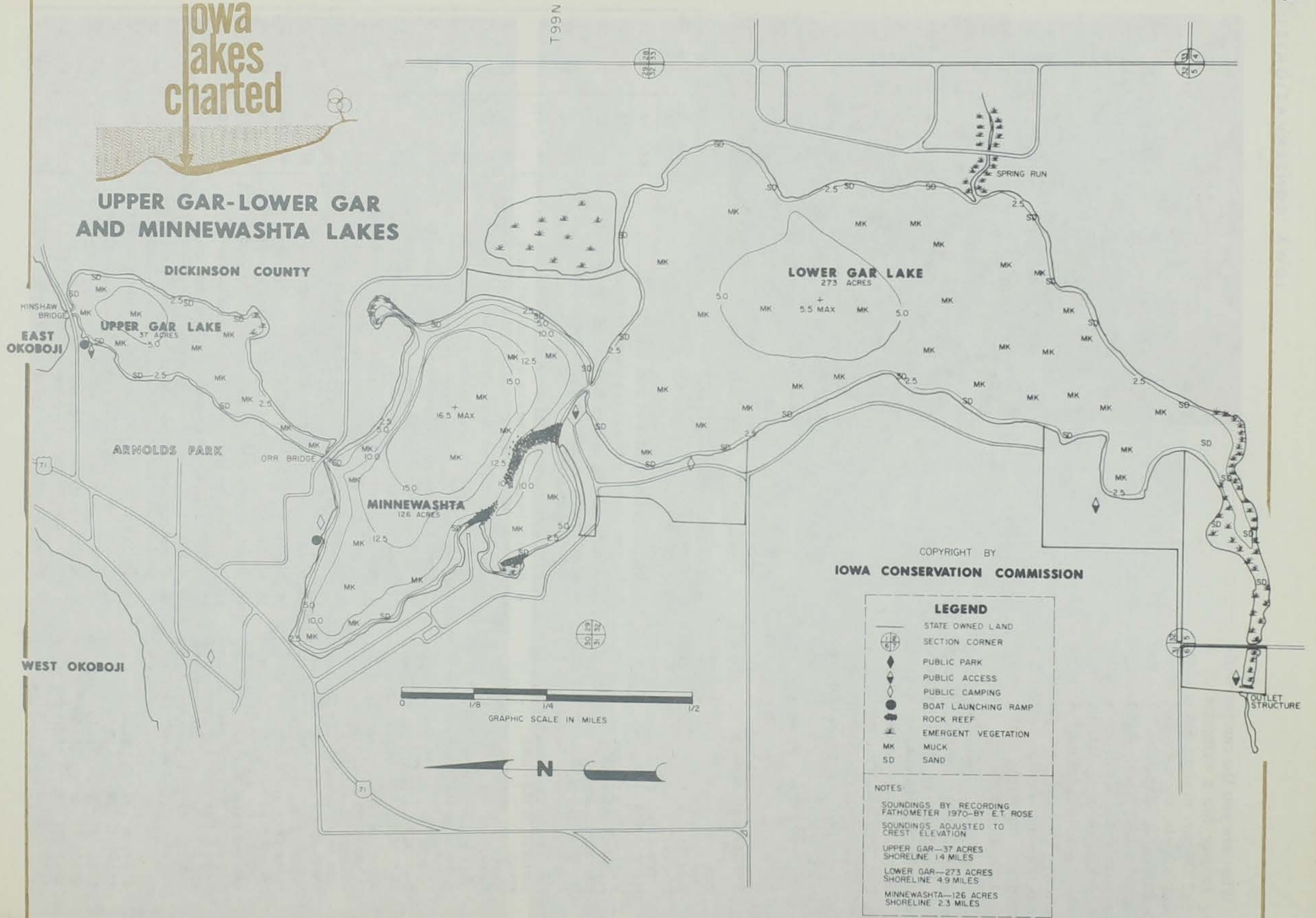


	Nat. Iowa	
	%	%
1. What type of camping equipment do you use?		
Van	3	0
Tent	6	3
Tent Trailer	19	19
Trailer	57	57
Truck camper	9	14
Motor home	5	6
2. What surface do you prefer on the site?		
Gravel	29	26
Grass	56	65
Other	10	8
3. How should the roads be surfaced in the camp area?		
Paved	50	49
Gravel	40	46
4. What should the time for quiet be in the camping area?		
10 P.M.	35	45
11 P.M.	51	45
12 P.M.	9	10
5. What time limit of stay in public parks should be set during high use periods?		
One week	30	41
Two weeks	59	50
Other	2	1
6. What price are you willing to pay for campgrounds? The price posted is for a full hook-up — including water, electricity and sewage or a dumping station. One-half of the posted price is what people want to pay for campsites with no electricity, central water supply and central washrooms.		
	Nat. Ia.	Nat. Ia.
\$1.50	6 10	\$4.50 1 1
\$2.00	10 23	\$5.00 1 2
\$2.50	21 25	\$6.50 2 0
\$3.00	28 25	\$10.00 1 0
\$3.50	17 9	FREE 2 0
\$4.00	9 1	

	Nat. Avg.		Iowa Avg.	
	Yes %	No %	Yes %	No %
1. Do you prefer a table at each site?	88	9	82	15
2. Do you prefer a fire ring at each site?	78	17	70	27
3. Should there be shower facilities in public parks?	86	11	78	22
4. Should there be public laundry facilities at the campground?	47	43	26	71
5. Should the sites be staggered in location?	78	7	73	8
6. Should electrical outlets be available at some sites in public campground?	89	7	93	5
7. Should there be an extra charge for electricity?	80	12	85	10
8. Should there be a limit to size of equipment in public parks?	39	59	24	70
9. Should the camping area be patrolled regularly?	95	3	93	7
10. Do you prefer controlled entrances and exits with identification of vehicles?	89	8	78	19
11. Should there be an area in public parks for overnight camping if the regular area is full?	92	6	92	6
12. Should there be a water pump or faucet in central location?	36	17	55	8
13. Should public parks have a sanitary dumping station?	91	5	85	12
14. Should a charge be made for the use of it?	40	53	40	52
15. Should pets be allowed in public camp areas?	61	34	66	34
16. Should campers with pets be in separate areas?	28	40	25	54
17. Do you prefer to have a site assigned to you?	10	53	10	52
18. Should there be provisions for church services, if possible?	83	11	83	14
19. Should picnickers and boaters be charged for using public park facilities?	70	28	88	11
20. Do you favor a yearly user fee for public parks?	58	38	67	33
21. Should there be an extra charge for a camping family over four people?	25	72	13	84
22. Would you prefer a concession on or near the campground?	75	20	57	43
23. Should a public telephone be in the camp area?	92	5	92	5

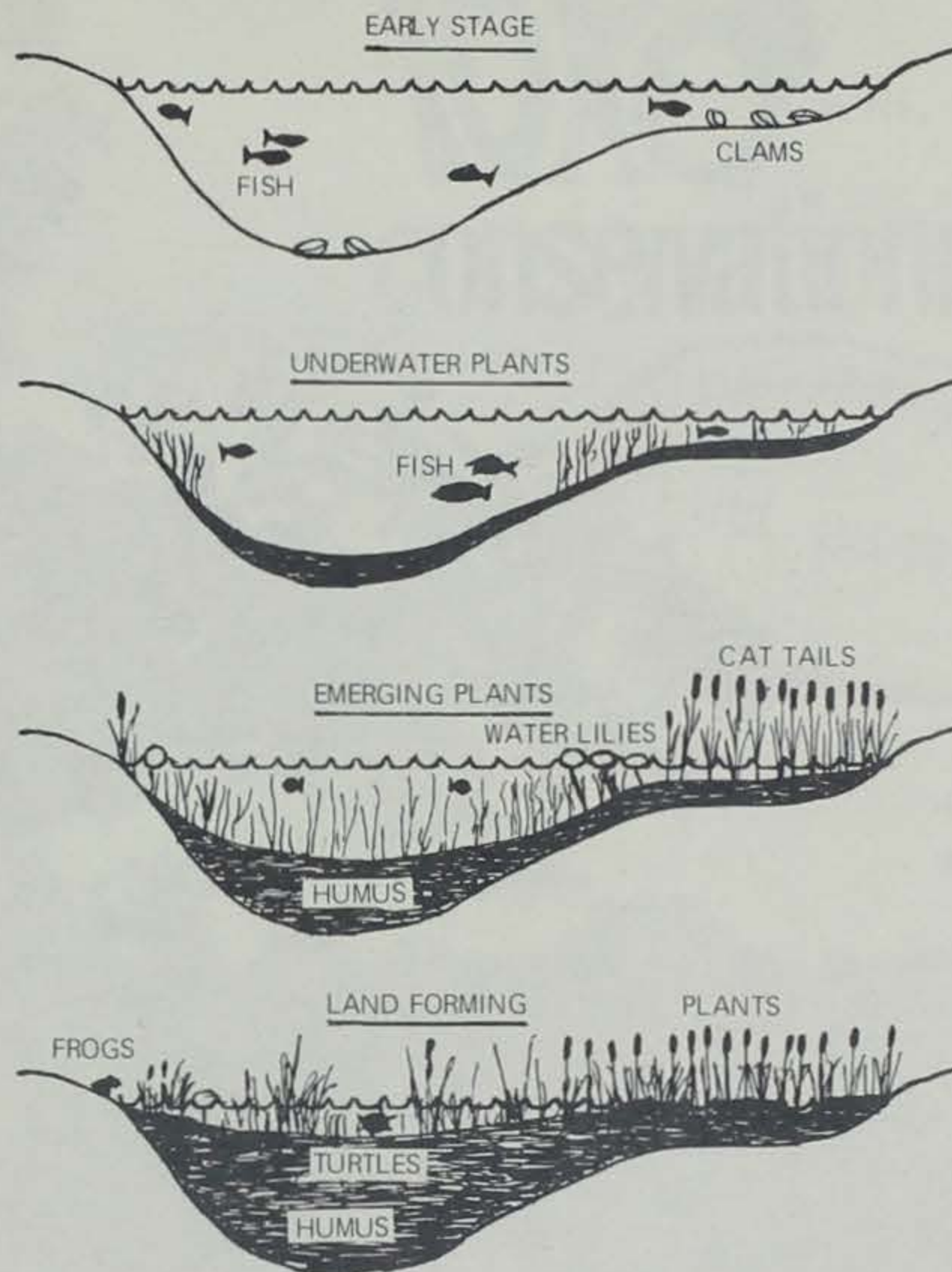
iowa
lakes
charted

UPPER GAR-LOWER GAR AND MINNEWASHTA LAKES



Classroom Corner

By Curt Powell



Have you ever wondered what the area where the forest exists looked like before there was a forest? Would you only have to use your imagination to visualize this?

What happens to rotten logs in a forest? What do the terms "climax" and "succession" mean when talking about a forest community?

A climax community, such as a matured forest, is a very stable community. It doesn't change as much as others, such as a prairie. Basically, it is the end product of constant change. A climax community can be compared, in some ways, to you and I. From the day we are born we are constantly growing and changing. There is a point in our life when we are considered matured or grown-up. This could be considered a "climax." A forest which has reached its climax can be said to be "grown-up"!

The organism, animals, plants, etc., in a climax community can obtain all of their needs there. There is plenty of living space

and food available and they do not create unfavorable conditions for themselves and others. You might conclude, therefore, that they are not replaced by other living things unless some **thing** happens to upset this delicate balance of nature.

What are some things that could upset this balance of nature? Fire? Storms? Man? Could inconsiderate acts by man cause destruction, however small, that could change a climax community?

Is this constant change we've talked about "succession"? Would you say that a rotten log slowly decaying and a pond filling up with humus are in a stage of succession?

A good example of succession is observing a small pond. You will notice bulrushes, cattails, and water lilies growing along the edges. Their roots are in the humus (soil) but the top parts are in the water. These plants must anchor their roots in soil. As these plants begin growing closer to the center and finally cover the pond,

what conclusion could you arrive at? Illustration No. 1 shows an example of pond succession.

How would an open field become a forest? Here is an experiment that may help you find the answer. In an abandoned lot, carefully remove a piece of sod fifteen inches square and five inches thick. Place it in a wooden box or metal tray, take it to your classroom and place it where it is exposed to sunlight. It should be watered every few days. Watch it closely and observe the various plants that are growing. Record your observations. Are there any small trees growing? Each week record your observations again. Are there new plants? Have some died? Are there plants that appear more dominant than others? How would birds, and animals, and heavy rains affect the soil? Can man upset this growth?

As you may notice, nature changes. Certain areas reach their climax before others. It is important that this succession go on so that new life can emerge.