

UNITED STATES GOVERNMENT

Memorandum

TO : Homer

DATE: August 16, 1968

FROM : Merrill

SUBJECT: Upland vegetation transects

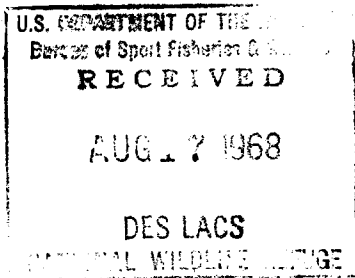
I worked up some forms and summarized the data for 1960 to 1968 as well as I could. I can't remember if we made measurements fairly close during the first years. Without these and without measurements now for comparison it is difficult to say whether some stands are spreading or decreasing. Some obvious changes have been summarized.

It is obvious (and the records indicate) that we had trouble identifying some of the grasses in years and sites where no seed heads formed. Some of the most conspicuous errors were for quackgrass and western wheat and for brome and quack. I believe the 1968 identifications were mostly OK for the most common grasses. Some time we should probably go back and correct these errors where possible.

Best regards.

Merrill

Merrill Hammond



There has been obvious mis-identification of grasses; e.g., quack grass and western wheat confused; sometimes brome and quack grass were confused.

Some field strips were reseeded to grass/alfalfa mixtures and some were left unseeded when retired.

In the seeded strips:

Brome was generally well established and has maintained fairly constant densities.

Alfalfa was generally well established and has maintained fairly constant densities.

Slender wheat decreased in most stands and nearly disappeared from some.

Crested wheat appears to have maintained fairly constant densities or to have increased from the original seed catch.

Where quack was common or dominant early in the field history there appears to have been little change. In general quack grass has not taken over significant portions of these fields.

Bluegrass (*Poa palustris* and *Poa praetensis*) has increased in nearly all segments.

There has been some increase in occurrence of rose and buckbrush, but neither are uniformly distributed through the samples yet.

Native forbs are probably increasing and true weeds decreasing. The records for 1960-64 were not available, except those showing dominant plants.

In unseeded strips:

Bluegrass and brome are increasing.

Quackgrass and brome became common or dominant by 1960 and have maintained their early densities.

Suggestions for 1970 survey: Examine field sheets for 1960 to 1964 to see if fairly precise measurements of species distribution were made. Attempt to make precise measurements of "zones" in 1970 to learn whether plant colonies are spreading and to establish a base for future measurements.

WILDLIFE. A brood of 3/4 grown sharptailed grouse was flushed from Unit A-12. These fields all look good for both nesting and brood use.

Des Lacs Upland Transects

Crop History

- A-6 (33503 to 33502). Retired after wheat in 1957. No record of reseeding. Probably summerfallowed.
- A-6 (33504 to 33506). Retired after flax crop in 1956. Reseeding probable but unrecorded. This strip (field strip No. 14) was in a brome/crested wheat/ alfalfa mixture, 1960 and after.
- A-7 (33507 to 33509). Strip (10) famed 1955; wheat 1957; idle 1958. No reseeding thereafter.
- A-7 (33509 to 33511). Strip (11) flax with alfalfa and brome seeded in 1956. Idle in brome/alfalfa 1957 on.
- A-12 (33513 to 33512). Was in barley in 1955. Retired prior to 1958. No other records. Field strip No. 3.
- A-12 (33512 to 33515). In wheat in 1955. Retired prior to 1958. No other records. Field strip No. 4.

Survey dates:

1968 - August 13. Bradley, Hammond, Bill Bair.

Date checked

Des Lacs Upland Transects

Ag. Unit No.: A-6

Field Strip No.: 13

Legal Description: NW 1/4 Sec. 6 T163N R88W

8/13

Transect No.: 33503 to 33502

Segment No.: A

Year	1960	1962	1964	1966	1968	1970	1972	1974	1976
Segment length				226	226				
bluegrass			C	C	D				
brome				F	C				
crested wheat									
quack	D	D	D	D	D				
slender wheat									
western wheat									
alfalfa									
aster									
aster, yellow									
bindweed				C	C				
buckwheat									
bull thistle				F	F				
Canada thistle									
dandelion									
dock									
evening primrose									
flixweed									
foxtail									
germander									
goatsbeard	C			C	F				
goldenrod									
gumweed									
horseweed									
lambs quarters									
lettuce, blue		C		C	C				
lettuce, yellow									
marsh elder									
nettle									
pennycress									
peppergrass									
prairie cone flower				F	F				
sagewort, fringed									
sagewort, long-leaf									
silverleaf									
skeletonweed									
sow thistle				C	F				
spikeweed									
sunflower									
sweet-clover, white				D	D ^{1/}				
sweet-clover, yellow				D					
tumble mustard									
vetch					F				
wild licorice									
wild morning-glory									
yarrow									
buckbrush				F	F				
rose			C	C	F				
Russian olive				F	F				

1/ seedlings only

33503 to

Transect No.: 33502

Segment No.: B

8/13

Segment No.: B

11 seedlings only

Des Lacs Upland Transects

Ag. Unit No.: A-6

Field Strip No.: 13

Legal Description: NW $\frac{1}{4}$ Sec. 6 T163N R88W

Transect No.: 33502 33503 to
Segment No.: C

Transect No.: 33502

Segment No.: C

[illegible]

1/ Seedlings only

Des Lacs Upland Transects

Ag. Unit No.: A-6

Field Strip No.: 13

Legal Description: NW¹/₄ Sec. 6 T163N R88W

Transect No.: 33502 to 33503

Segment No.: D

8/13

[illegible]

Ag. Unit No.: A-6

Field Strip No.: 14

Legal Description: NW¹/₄ Sec. 6 T163N R88W

Transect No.: 33506

Segment No.: A

8/13

[illegible]

Des Lacs Upland Transects

Ag. Unit No.: A-6

Field Strip No.: 14

Legal Description: NW $\frac{1}{4}$ Sec. 6 T163N R88W

Transect No.: ^{33504 to} 33506
Segment No.: B

Transect No.: 33506

Segment No.: B

8/13

[illegible]

33504 to

Transect No.: 33506

Segment No.: C

8/13

[illegible]

Date Checked

Ag. Unit No.: A-7

Transect No.: 33509

Field Strip No.: 10

Segment No.: A

Legal Description: SW¹/₄ Sec. 21 T162N R88W

8/3

[illegible]

33507 t0

Transect No.: 33509

Segment No.: B

$$\frac{8}{15}$$

Russian olive

Des Lacs Upland Transects

Transect No.: 33507 to 33509
Segment No.: C

Ag. Unit No.: A-7

Field Strip No.: 10

Legal Description: SW 1/4 Sec. 21 T162N R88W

8/13

Year	1960	1962	1964	1966	1968	1970	1972	1974	1976
Segment length				192	192				
bluegrass		C		D	C				
brome			C?		F				
crested wheat									
quack	D	D	D	D	D				
slender wheat									
western wheat									
alfalfa									
aster									
aster, yellow									
bindweed				F	F				
buckwheat									
bull thistle									
Canada thistle					F				
dandelion				F	F				
dock									
evening primrose									
flixweed									
foxtail				F					
germander									
goatsbeard				F	F				
goldenrod					F				
gunweed									
horseweed									
lambs quarters									
lettuce, blue				C	C				
lettuce, yellow					F				
marsh elder									
nettle									
pennycress									
peppergrass									
prairie cone flower									
sagewort, fringed				C	C				
sagewort, long-leaf				F	F				
silverleaf				F	F				
skeletonweed					F				
sow thistle									
spikeweed									
sunflower									
sweet-clover, white				C	C ^{1/}				
sweet-clover, yellow									
tumble mustard									
vetch									
wild licorice									
wild morning-glory									
yarrow									
buckbrush									
rose		C		F	F				
Russian olive									

^{1/} Seedlings

Des Lacs Upland Transects

Ag. Unit No.: A-7

Field Strip No.: 10

Legal Description: SW $\frac{1}{4}$ Sec. 21 T162N R88W

Transect No.: 33509 ^{33507 to}
Segment No.: D

Transect No.: 33509

Segment No.: D

[illegible]

1/ seedlings

Ag. Unit No.: A-7

Transect No.: 33511

Field Strip No.: 11

Segment No.: A

Legal Description: SW $\frac{1}{4}$ Sec. 21 T162N R88W

8/13

[illegible]

Date Checked

Des Lacs Upland Transects

33513 to

Ag. Unit No.: A-12

Transect No.: 33512

Field Strip No.: 3

Segment No.: A

Legal Description: SE¹/₄ Sec. 32 T160N R88W

8/13

Year	1960	1962	1964	1966	1968	1970	1972	1974	1976
Segment length				159	159				
bluegrass				C	C				
brome		D			D				
crested wheat									
quack			D	C	F				
slender wheat		C	C	C	?				
western wheat		C		C	D				
alfalfa				F	C				
aster					F				
aster, yellow									
bindweed					C				
buckwheat									
bull thistle									
Canada thistle									
dandelion				F	F				
dock									
evening primrose				F					
flixweed	C								
foxtail									
germander									
goatsbeard				C	F				
goldenrod									
gunweed									
horseweed									
lambs quarters									
lettuce, blue	C								
lettuce, yellow									
marsh elder									
nettle									
pennycress									
peppergrass									
prairie cone flower									
sagewort, fringed				F	C				
sagewort, long-leaf				F	F				
silverleaf									
skeletonweed									
sow thistle									
spikeweed									
sunflower	C			F					
sweet-clover, white									
sweet-clover, yellow				F	F				
tumble mustard									
vetch				F					
wild licorice									
wild morning-glory				F					
yarrow									
buckbrush									
rose									
Russian olive									
Wild oats	C								

Des Lacs Upland Transects

Ag. Unit No.: A-~~8~~12

Field Strip No.: 3

Legal Description: SE $\frac{1}{4}$ Sec. 32 T160N R88W

8/13

Transect No.: 33513 to 33512
Segment No.: B

Year	1960	1962	1964	1966	1968	1970	1972	1974	1976
Segment length				114	114				
bluegrass				F	F				
brome				F	F				
crested wheat									
quack		D	D	D	D				
slender wheat	C	C	D						
western wheat	D	C							
alfalfa									
aster				F	F				
aster, yellow									
bindweed									
buckwheat									
bull thistle									
Canada thistle									
dandelion				F	F				
dock				F					
evening primrose				F					
flixweed									
foxtail									
germander									
goatsbeard				F	F				
goldenrod									
gumweed									
horseweed									
lambs quarters									
lettuce, blue									
lettuce, yellow					F				
marsh elder									
nettle									
pennycress									
peppergrass									
prairie cone flower									
sagewort, fringed									
sagewort, long-leaf				F					
silverleaf									
skeletonweed									
sow thistle									
spikeweed									
sunflower				F	F				
sweet-clover, white									
sweet-clover, yellow									
tumble mustard									
vetch	C				F				
wild licorice									
wild morning-glory									
yarrow				F	F				
buckbrush									
rose				F					
Russian olive									
Teucrium (Germander)					F				

Des Lacs Upland Transects

Ag. Unit No.: A-12

Field Strip No.: 3

Legal Description: SE $\frac{1}{4}$ Sec. 32 T160N R88W

8/13

Transect No.: 33512

Segment No.: C

Year	1960	1962	1964	1966	1968	1970	1972	1974	1976
Segment length				20	20				
bluegrass					D				
brome					C				
crested wheat									
quack		D							
slender wheat	C		D	D					
western wheat	D			D	D				
alfalfa									
aster					F				
aster, yellow									
bindweed									
buckwheat									
bull thistle									
Canada thistle									
dandelion					C				
dock									
evening primrose									
flixweed									
foxtail									
germander									
goatsbeard									
goldenrod									
gunweed									
horseweed									
lambs quarters									
lettuce, blue									
lettuce, yellow					F				
marsh elder									
nettle									
pennycress									
peppergrass									
prairie cone flower									
sagewort, fringed									
sagewort, long-leaf									
silverleaf									
skeletonweed									
sow thistle									
spikeweed									
sunflower									
sweet-clover, white									
sweet-clover, yellow									
tumble mustard									
vetch					F				
wild licorice									
wild morning-glory									
yarrow									
buckbrush									
rose									
Russian olive									
Teucrium (Germander)					F				

33513 to

Transect No.: 33512

Segment No.: D

8/13

[illegible]

Des Lacs Upland Transects

33513 to

Ag. Unit No.: A-2 12

Transect No.: 33512

Field Strip No.: 3

Segment No.: E

Legal Description: SE $\frac{1}{4}$ Sec. 32 T160N R88W

8/13

Year	1960	1962	1964	1966	1968	1970	1972	1974	1976
Segment length				207	207				
bluegrass				F	C				
brome					F				
crested wheat				F					
quack					F				
slender wheat	D	D	D	D					
western wheat				D	D				
alfalfa				F	F				
aster				F	F				
aster, yellow									
bindweed					F				
buckwheat									
bull thistle									
Canada thistle									
dandelion				C	F				
dock									
evening primrose									
flixweed				F					
foxtail									
germander									
goatsbeard				C	F				
goldenrod									
gunweed				F	C				
horseweed				C	F				
lambs quarters									
lettuce, blue									
lettuce, yellow				F					
marsh elder									
nettle									
pennycress									
peppergrass				F	C				
prairie cone flower					F				
sagewort, fringed									
sagewort, long-leaf									
silverleaf									
skeletonweed									
sow thistle									
spikeweed									
sunflower				F					
sweet-clover, white									
sweet-clover, yellow					F				
tumble mustard									
vetch									
wild licorice									
wild morning-glory									
yarrow									
buckbrush									
rose									
Russian olive									
Wild oats	D		D						

Des Lacs Upland Transects

33513 to

Ag. Unit No.: A-12

Transect No.: 33512

Field Strip No.: 3

Segment No.: F

Legal Description: SE $\frac{1}{4}$ Sec. 32 T160N R88W

8/13

Year	1960	1962	1964	1966	1968	1970	1972	1974	1976
Segment length				143	143				
bluegrass				C	C				
brome				F	F				
crested wheat									
quack	D		D						
slender wheat		D							
western wheat		D		D	D				
alfalfa									
aster									
aster, yellow									
bindweed					C				
buckwheat									
bull thistle									
Canada thistle									
dandelion				F					
dock									
evening primrose									
flixweed									
foxtail									
germander									
goatsbeard				C	F				
goldenrod									
gunweed									
horseweed									
lambs quarters									
lettuce, blue									
lettuce, yellow									
marsh elder									
nettle									
pennycress									
peppergrass									
prairie cone flower									
sagewort, fringed					F				
sagewort, long-leaf									
silverleaf				C	C				
skeletonweed									
sow thistle									
spikeweed									
sunflower									
sweet-clover, white									
sweet-clover, yellow				F	F				
tumble mustard									
vetch									
wild licorice									
wild morning-glory									
yarrow					F				
buckbrush									
rose									
Russian olive									

Des Lacs Upland Transects

33513 to

Ag. Unit No.: A-~~3~~ 12

Field Strip No.: 3

Legal Description: SE¹/₄ Sec. 32 T160N R88W

Transect No.: 33512

Segment No.: G

8/13

[illegible]

Date checked

Des Lacs Upland Transects

33512 to

Ag. Unit No.: A-12Transect No.: 33515Field Strip No.: 4Segment No.: ALegal Description: SE 1/4 Sec. 32 T160N R88W

8/13

Year	1960	1962	1964	1966	1968	1970	1972	1974	1976
Segment length				57	57				
bluegrass		D		C					
brome			D	D	D				
crested wheat					F				
quack				C					
slender wheat									
western wheat									
green needlegrass			C						
alfalfa	D	D		C	C				
aster									
aster, yellow									
bindweed									
buckwheat									
bull thistle									
Canada thistle									
dandelion									
dock									
evening primrose									
flixweed									
foxtail									
germander									
goatsbeard									
goldenrod									
gunweed									
horseweed									
lambs quarters									
lettuce, blue									
lettuce, yellow									
marsh elder									
nettle									
pennycress									
peppergrass									
prairie cone flower									
sagewort, fringed									
sagewort, long-leaf									
silverleaf									
skeletonweed									
sow thistle									
spikeweed									
sunflower									
sweet-clover, white									
sweet-clover, yellow									
tumble mustard		D							
vetch									
wild licorice									
wild morning-glory									
yarrow									
buckbrush									
rose									
Russian olive									
wild oats	D								

8/13 - flushed 11 young ST Grouse with hen, 7/4 grown, from field included in transect

Des Lacs Upland Transects

Ag. Unit No.: A-12

Field Strip No.: 4

Legal Description: SE¹/₄ Sec. 32 T160N R88W

8/13

Transect No.: 33515

Segment No.: B

[illegible]

Des Lacs Upland Transects

Ag. Unit No.: A-12

Field Strip No.: 4

Legal Description: SE $\frac{1}{4}$ Sec. 32 T160N R88W

8/13

Transect No.: 33512 to 33515

Segment No.: C

Year	1960	1962	1964	1966	1968	1970	1972	1974	1976
Segment length				72	72				
bluegrass			C	C	D				
brome									
crested wheat			C	C	C				
quack									
slender wheat			C	D					
western wheat					F				
alfalfa		D	D	D	D				
aster									
aster, yellow									
bindweed									
buckwheat					C				
bull thistle									
Canada thistle									
dandelion				F	F				
dock									
evening primrose									
flixweed	D			F					
foxtail				C					
germander									
goatsbeard				C	C				
goldenrod									
gumweed									
horseweed									
lambs quarters									
lettuce, blue									
lettuce, yellow									
marsh elder									
nettle									
pennycress									
peppergrass									
prairie cone flower									
sagewort, fringed									
sagewort, long-leaf									
silverleaf									
skeletonweed									
sow thistle									
spikeweed									
sunflower									
sweet-clover, white									
sweet-clover, yellow									
tumble mustard									
vetch									
wild licorice									
wild morning-glory									
yarrow									
buckbrush									
rose									
Russian olive									
Wild oats	D								

Des Lacs Upland Transects

Ag. Unit No.: A-12

Field Strip No.: 4

Legal Description: SE¹/₄ Sec. 32 T160N R88W

8/13

33512 to
Transect No.: 33515

Segment No.: D

Year	1960	1962	1964	1966	1968	1970	1972	1974	1976
Segment length				270	270				
bluegrass			F	F	F				
brome			F	F	F				
crested wheat		F	F	F	C				
quack		C		C	C				
slender wheat			F	C	F				
western wheat									
alfalfa	D	D	D	D	D				
aster									
aster, yellow									
bindweed		F							
buckwheat				F	C				
bull thistle									
Canada thistle									
dandelion				F	C				
dock									
evening primrose									
flixweed				F	C				
foxtail			F	F	F				
germander									
goatsbeard			F	C	F				
goldenrod									
gunweed									
horseweed									
lambs quarters									
lettuce, blue		F							
lettuce, yellow			F	F	F				
marsh elder									
nettle				F					
pennycress									
peppergrass									
prairie cone flower									
sagewort, fringed									
sagewort, long-leaf									
silverleaf									
skeletonweed									
sow thistle									
spikeweed									
sunflower									
sweet-clover, white									
sweet-clover, yellow									
tumble mustard		F		F					
vetch									
wild licorice									
wild morning-glory									
yarrow									
buckbrush									
rose				F	F				
Russian olive									
Wild oats	D	F							

Des Lacs Upland Transects

33512 to

Ag. Unit No.: A-12

Transect No.: 33515

Field Strip No.: 4

Segment No.: E

Legal Description: SE $\frac{1}{4}$ Sec. 32 T160N R88W

8/13

Year	1960	1962	1964	1966	1968	1970	1972	1974	1976
Segment length				249	249				
bluegrass			C	C	C				
brome			C	D	D				
crested wheat		C	C	D	F ^{1/}				
quack		C		D	D				
slender wheat			C						
western wheat									
alfalfa	D	D		D	D				
aster									
aster, yellow									
bindweed		C							
buckwheat				F	C				
bull thistle									
Canada thistle									
dandelion				F	C				
dock									
evening primrose									
flixweed				F	F				
foxtail			C	F					
germander									
goatsbeard			C	C	C				
goldenrod									
gumweed									
horseweed									
lambs quarters									
lettuce, blue		C		C	?				
lettuce, yellow			C	F	F				
marsh elder									
nettle									
pennycress									
peppergrass									
prairie cone flower									
sagewort, fringed									
sagewort, long-leaf									
silverleaf									
skeletonweed									
sow thistle									
spikeweed									
sunflower									
sweet-clover, white									
sweet-clover, yellow									
tumble mustard		C							
vetch									
wild licorice									
wild morning-glory									
yarrow									
buckbrush									
rose									
Russian olive									
Wild oats	D	C							

1/ All in last 75'

