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Quadrat Modification Useful
duction studies in northeast Okla-
tage in tall-grass rangeland pro-
quadrat are the reduction of the area
precision clipping at various heights
function of quadrat type, vegetation
lidity of these estimates are often a
Aldon, Earl F. 1970a. Fourwing
quadrats at 15 cm intervals from 0 to
105 cm. This particular grassland plot
was dominated by little bluestem (An-
dropogon scoparius), switchgrass (Pan-
icium virgatum), and indiangrass (Sor-
ghastrum nutans).
The construction of the quadrat (Fig.
1) is ideal for working in tall-grass re-
gions where one of the most time con-
suming jobs is quadrat placement. Use
of a conventional circular quadrat is
at best a frustrating experience, as
placement involves working around the
complete circumference of the quadrat
using a pull-tug rearrangement method
in order to get the quadrat to lie flat
on the soil surface. Randomization also
suffers as this process proceeds. Using
the clear plexiglass sickledrat, quadrat
randomization, location, and placement
are easily accomplished as follows:

1. The stake (Fig. 1, B) is thrown
   or placed according to a pre-
determined scheme.
2. Location of the sample quadrat
   is determined by this point
   and the stake is pushed into
   the soil, using the driving cap
   if necessary.
3. The sickledrat (Fig. 1, A) is
   placed on the stake and rotated
   slightly to set the point.
4. Clipping proceeds by following
   the sickledrat’s rotation on the
   stake.

The sharp point on the tip of the
quadrat eliminates many perimeter
decisions as the point slips through
the vegetation dividing it precisely at the
perimeter point. The height at which
vegetation is clipped can be determined
by the length of the stake used, or the
depth to which the stake is pushed
into the ground. If height interval clipping
is to be done, a stake of suitable length
is chosen and fitted with a smooth
sleeve and thumbscrew (Fig. 1, D).
The quadrat which rests above the sleeve,
can then be adjusted to any desired
height or interval and rotated for clip-
ing and perimeter determination. If
soil and moisture conditions warrant,
the stake can be driven to the proper
depth, without damage to that portion

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and Function of Grassland Ecosystems.
over which the sickledrat slips, by using
the driving cap (Fig. 1, C) which screws
directly on to the threaded portion of
the stake (Fig. 1, B).

The basic materials used for this
model were 0.25 inch plexiglass for the
quadrat proper, case hardened steel
for the stakes, and standard pipe and
fittings for the driving cap. Many
types of material could be used for the
quadrat; however, the plexiglass seemed
most desirable, as it is lightweight,
durable, and easily repaired.

This versatile quadrat should be
useful in many types of rangeland
analyses.

Rapid Point Survey by
Bayonet Blade

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A bayonet was developed for rapid
points in tall dense herbaceous vege-
tation (Fig. 1 and 2). It is a steel blade
about 65 cm high, 4.5 cm broad and 2
mm thick. This blade is sharp-edged
along one height which constitutes the
line of sight. The upper part is T
shaped and used as a plumb-line. The
lower part is bevelled on the opposite
side to the sharp-edged height; which
reduces the disturbance of vegetation
when the bayonet blade is vertically
stuck into the ground. At each species,
all contacts of any part of the vegeta-
tion of every species, with the sharp-
edged part of the blade, are recorded.

A trained observer can do 350 sight-
ings a day. This apparatus has been
used successfully in tall grassland vege-
tation of France. Data obtained by

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salem, in editing the paper.

bayonet recording give very small devi-
ation (Poissonet, 1969) as compared
to a needle point frame (Long et al.,
1972).

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point frame for exact line transects.
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SRM Annual Meetings

1973—Boise, Idaho
Rodeway Inn
February 4–9

1974—Tucson, Arizona
Downtown Motor Inn
February 3–8