A Versatile Vegetation Sampling Quadrat Frame[1]

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Censador Versátil De Vegetación

Resumen[3]

Para estudios ecológicos cuantitativos de vegetación en praderas naturales complejas, ha side diseñado un censador de un metro cuadrado, dividido en decímetros, hecho de madera y completamente plegable. Combinando dos censadores es posible obtener parcelas de diversos tamaños y formas.

Este censador permite además, hacer otras mensuras—sea uno solo o dos combinados—en el campo, que son necesarios en todo estudio ecológico. Sirve como referencia para tomar fotografías de vegetación, de las características de la superficie del suelo y perfiles de suelos; puede usarse como mira para leer niveles, alinear, etc.

In range lands of complex vegetation composed of a mixture of shrubs, grasses, forbs, and mosses, quantitative study of the vegetation becomes laborious from the point of view of instrumentation, no matter how sophisticated it is; likely it is necessary to carry several of them and some times expensive ones. Keeping in mind this fact and without losing the precision that is required in quantitative studies of the vegetation, a sampling frame has been devised, which can be easily constructed. The materials for making two frames can be purchased for less than $3.

The frame is one square meter, made of wood—4 cms wide, 2 cms thick, 108 cms long—the corners are joined with bolts, that can be adjusted with wingnuts for positioning the frame and folding it. Two sides of the frame have hinges, that allow the frame to fold (Fig. 1). The frame is divided in decimeters painted in two colors (Fig. 2), which allows easy reading on percentage basis, since 1 dm^2 is equal to 1% of the square meter. The frame can be adjusted for different size and shape quadrats, if the study plot is larger than 1 m^2, the frame can be used as a measuring unit as many times as required, but for plots smaller than one meter, two frames are needed. For instance for one 0.5-meter plot, one frame is positioned with open end, and the other frame folded and joined to the opened end of the former, thus making the size of the plot (Fig. 3); each square decimeter represents 2% of the total 0.5-meter plot. If 0.25 m^2 is needed, the combination can be made as it is shown in Fig. 4, and each square decimeter represents 4% of the total 0.25 m^2, and so forth.

Open end frames can be used either singly or combined, positioning with minimal disturbance and arrangement of the herbaceous vegetation and also can be placed under shrubs and around small trees. The two-color painting provides the points for ocular alignment, even in an open end frame, Fig. 5 and 6 show these possibilities; keep in mind that some other combinations can be made with no difficulty.

Briefly, the frames are suitable for some other uses that go along with the study of the vegetation in any ecological research. The frame can be used as a reference for taking pictures of vegetation, soil surface characteristics, soil profiles, etc. (Fig. 7); also they can be used as rods for precise slope reading with abney level or any other instruments (Fig. 8). The author has used it also for alignments in plot demarcations, etc. There are several other uses for this frame, which demonstrates that in spite of its simplicity it is a very handy device for field vegetation studies.

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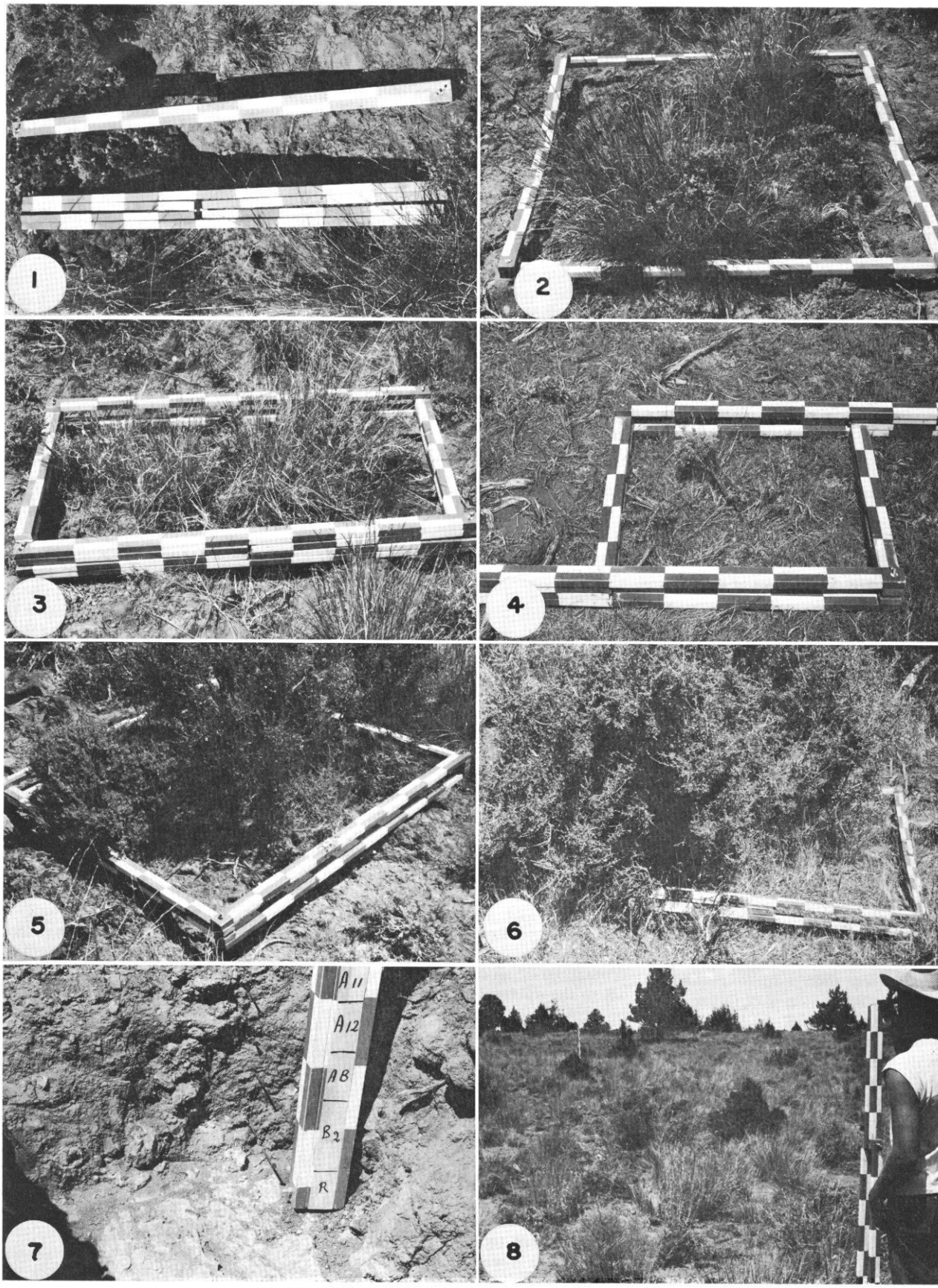

FIG. 1 to 8. The quadrat sampling frame and some of its uses.