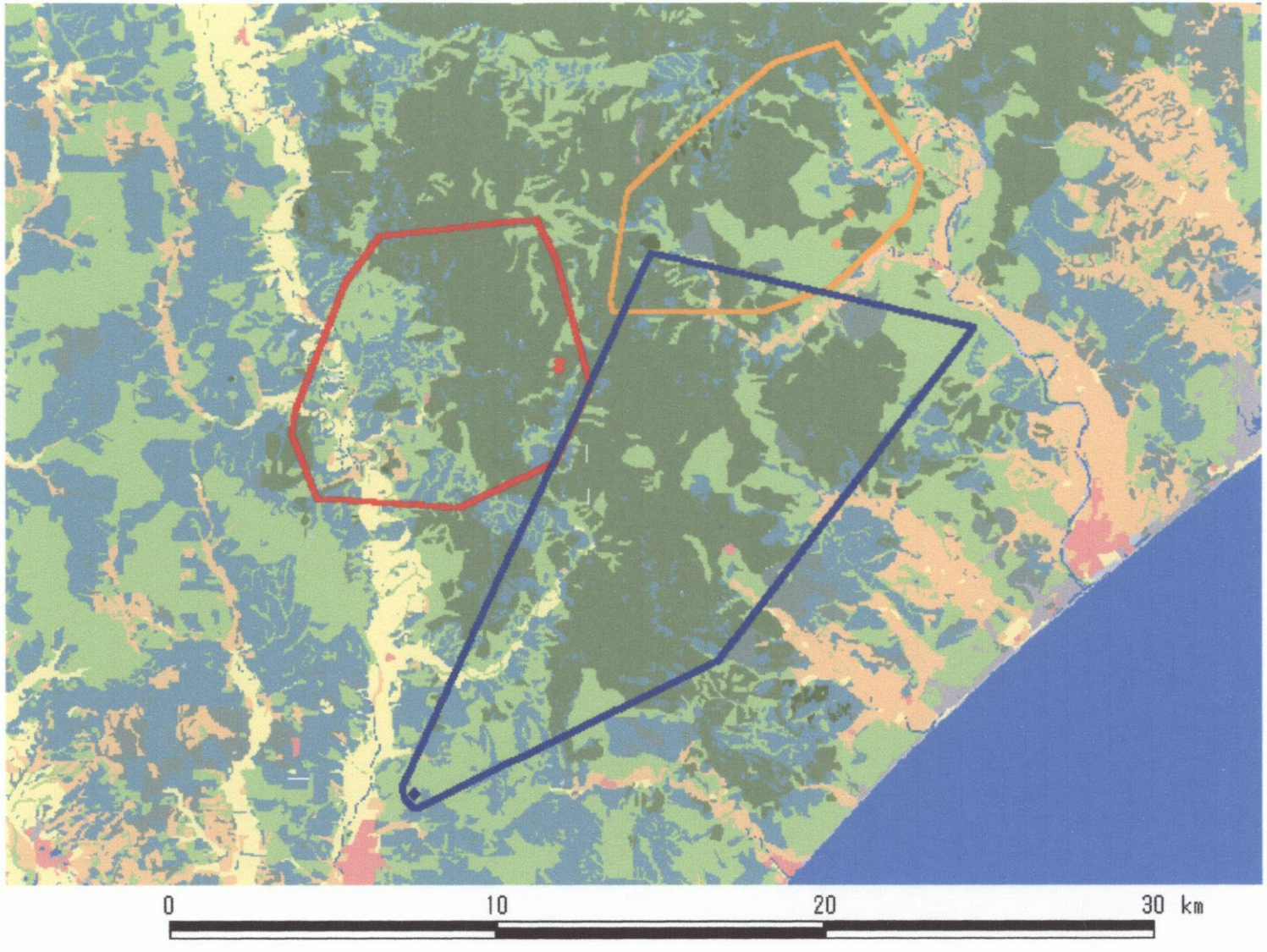


Figure 5-1. MCP home ranges of 3 bears in Urahoro, Hokkaido. Each polygon indicates individual home range; red: Minmin (adult-female), orange: Kanna (adult-female), blue: Rocky (subadult-male). Den site locations for each individual are represented by diamonds.

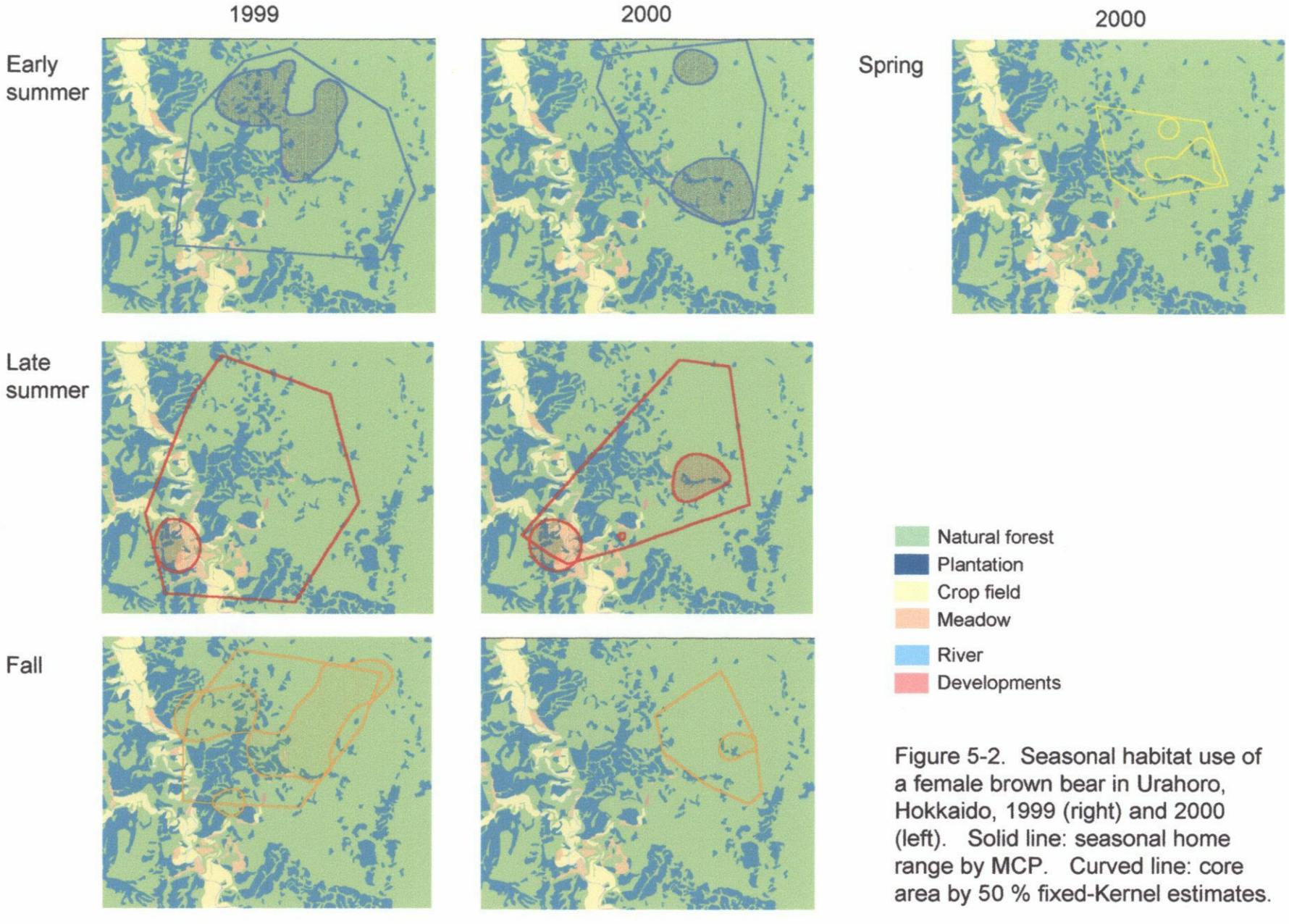


Figure 5-2. Seasonal habitat use of a female brown bear in Urahoro, Hokkaido, 1999 (right) and 2000 (left). Solid line: seasonal home range by MCP. Curved line: core area by 50 % fixed-Kernel estimates.

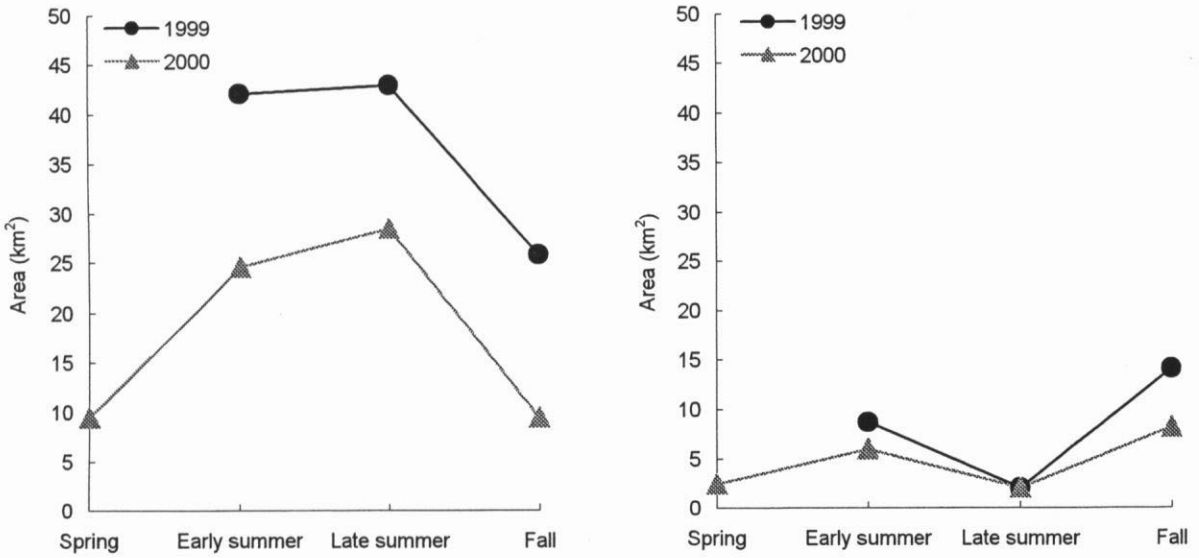


Figure 5-3. Seasonal changes in home range sizes (km^2) of a female bear in Urahoro, Hokkaido. Seasonal home ranges were estimated by MCP (left) and core areas (50% fixed-Kernel method, right).

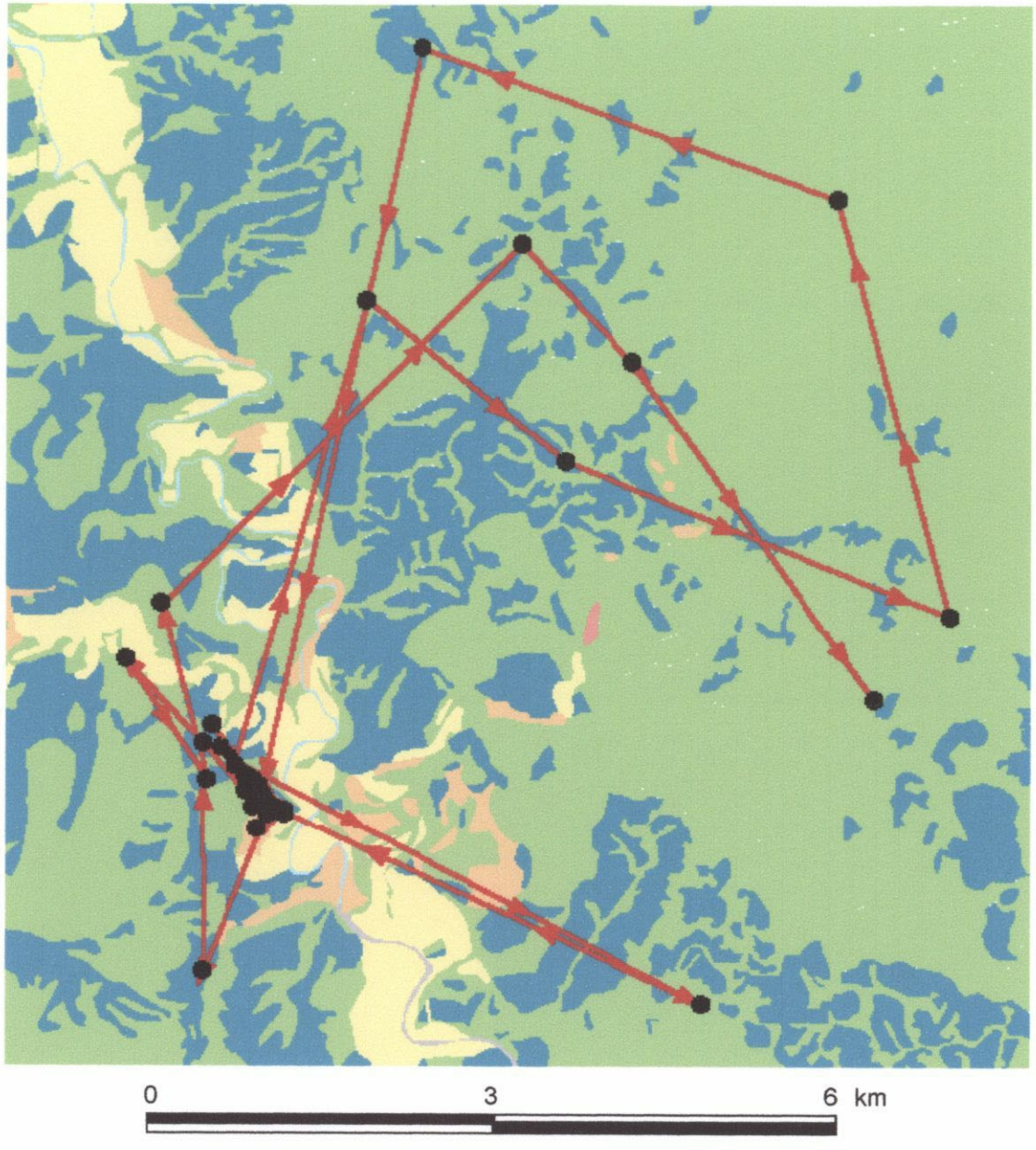


Figure 5-4. Movements of a female brown bear from 12 August to 9 September, 1999, Urahoro, Hokkaido.

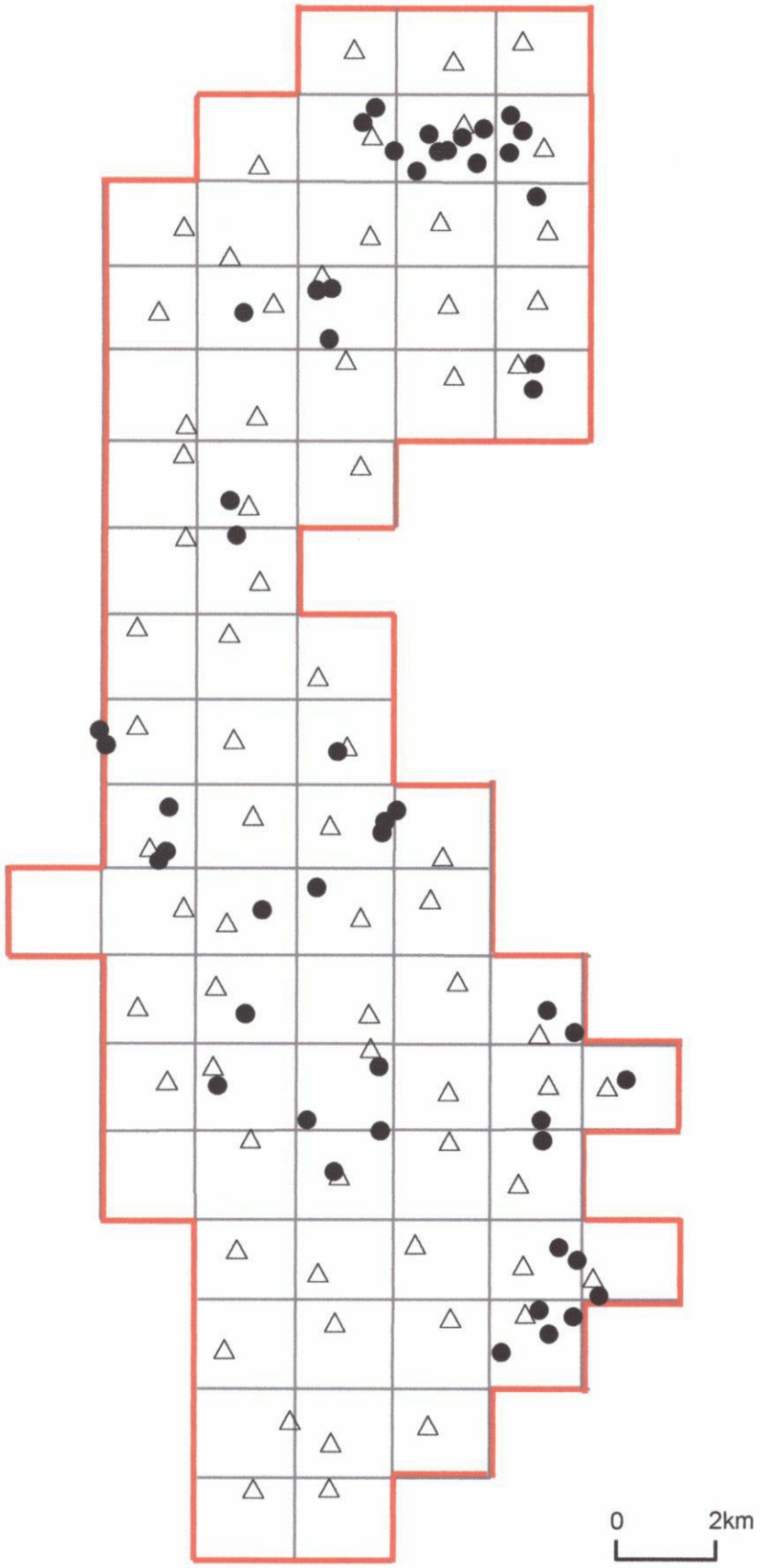


Figure 6-1. Study area boundary (bold line), grid system (thin line), and locations of the hair sampling sites in Urahoro, Hokkaido. Open triangles: hair traps, solid dots: "rub trees".

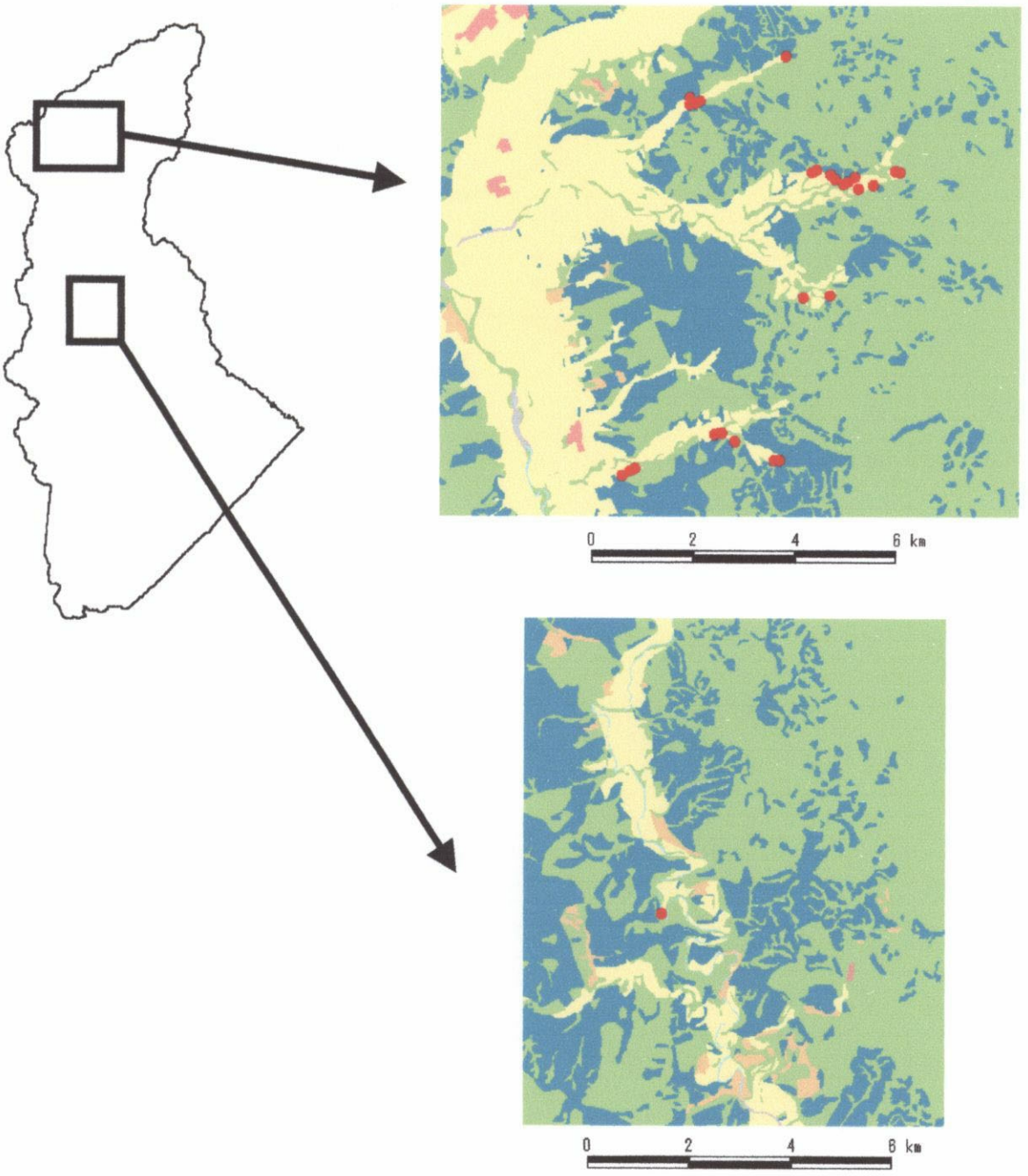


Figure 6-2. Locations (red dot) of the 28 farmlands that were checked for bear invasion in Urahoro, Hokkaido, 2000.

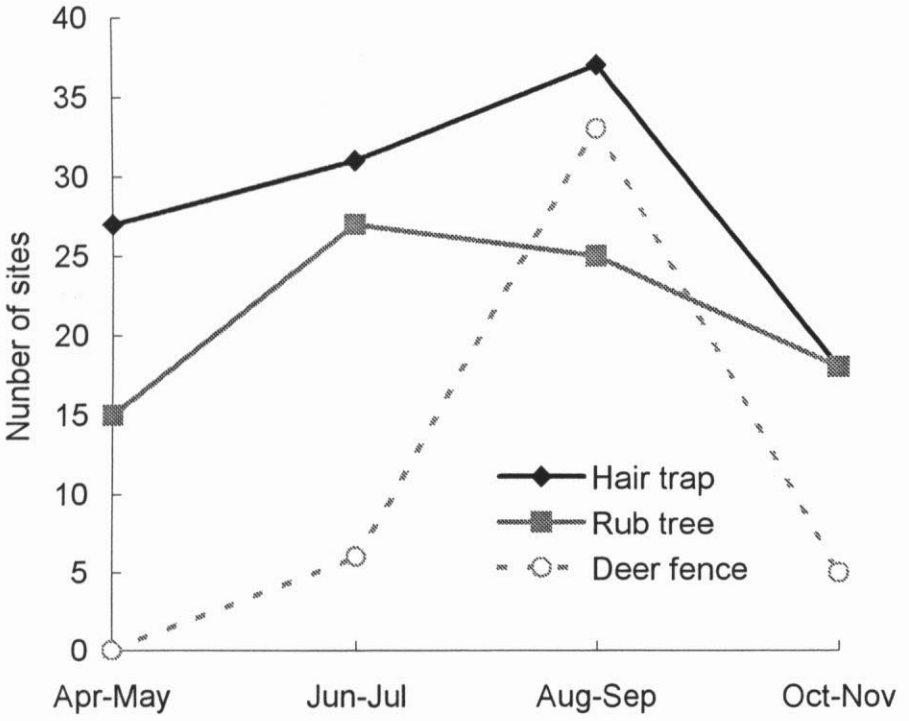


Figure 6-3. Number of sites where hairs of brown bears were collected. Diamond with solid line: hair traps, square with gray line: rub trees, and open circle with broken line: deer fence.

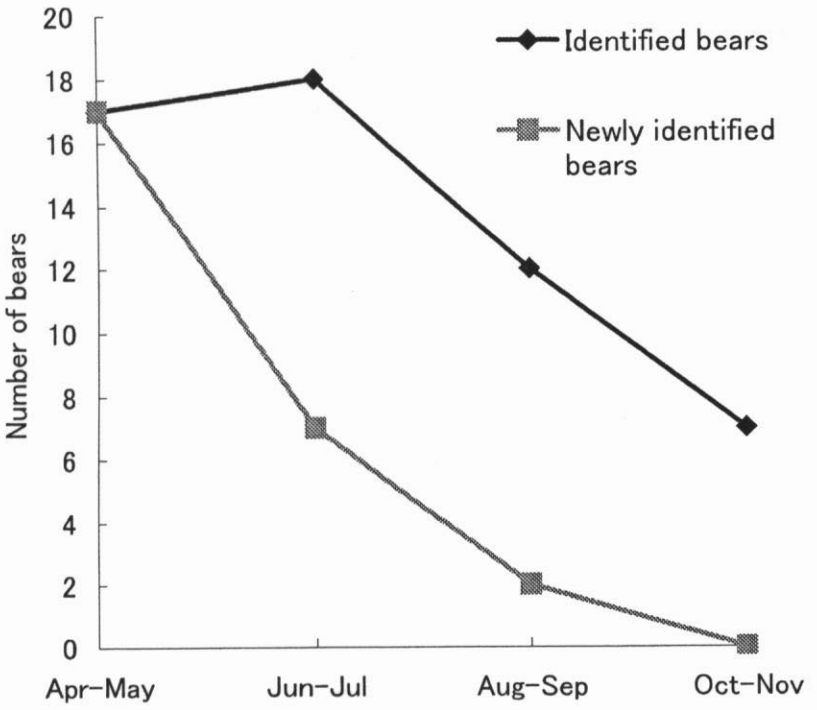


Figure 6–4. Total number of identified bears (diamond) and newly identified bears (square) at each trap session.

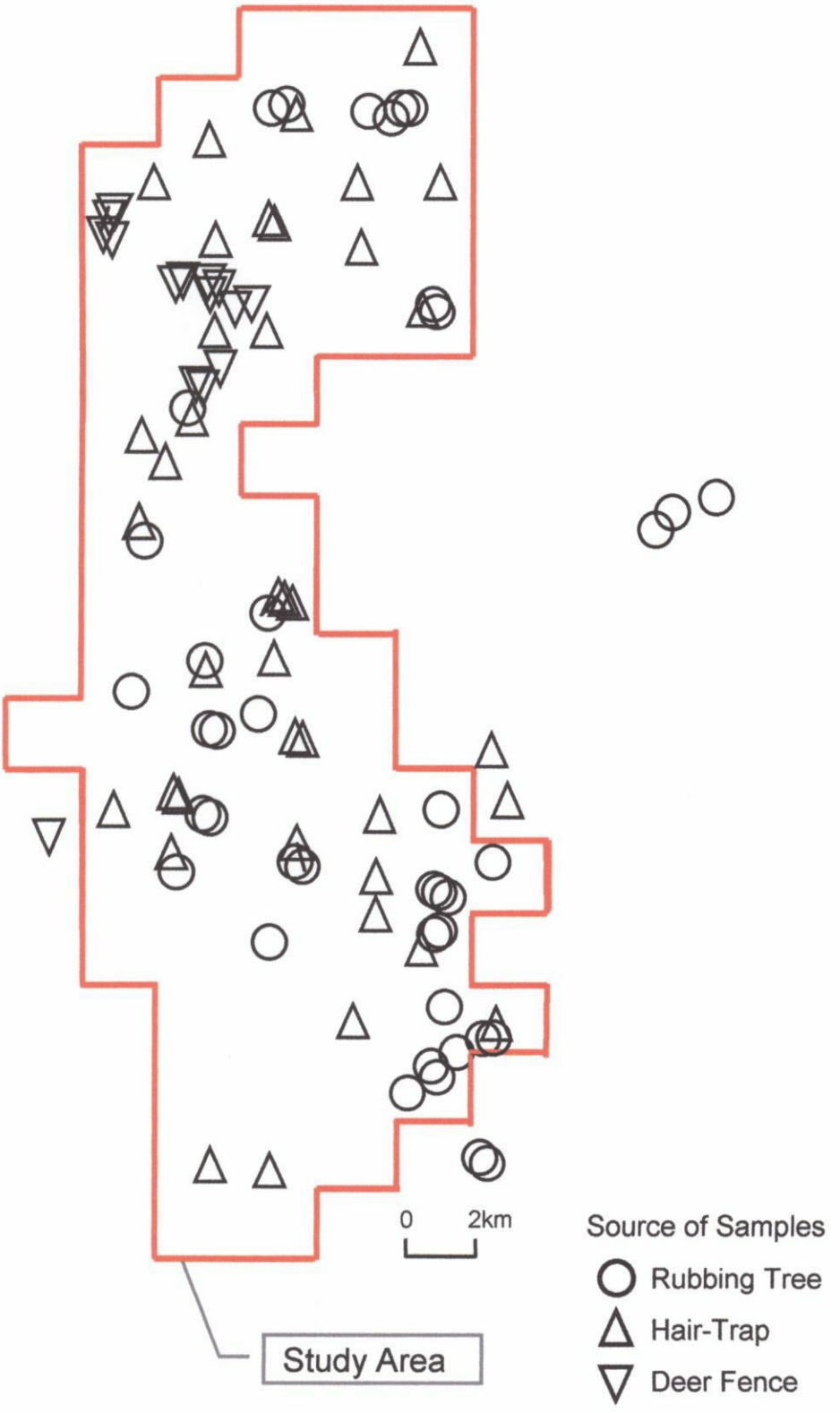


Figure 6-5. Distributions of genotyping success samples by 8 loci of microsatellite DNA analysis, Urahoro, Hokkaido, 2000.

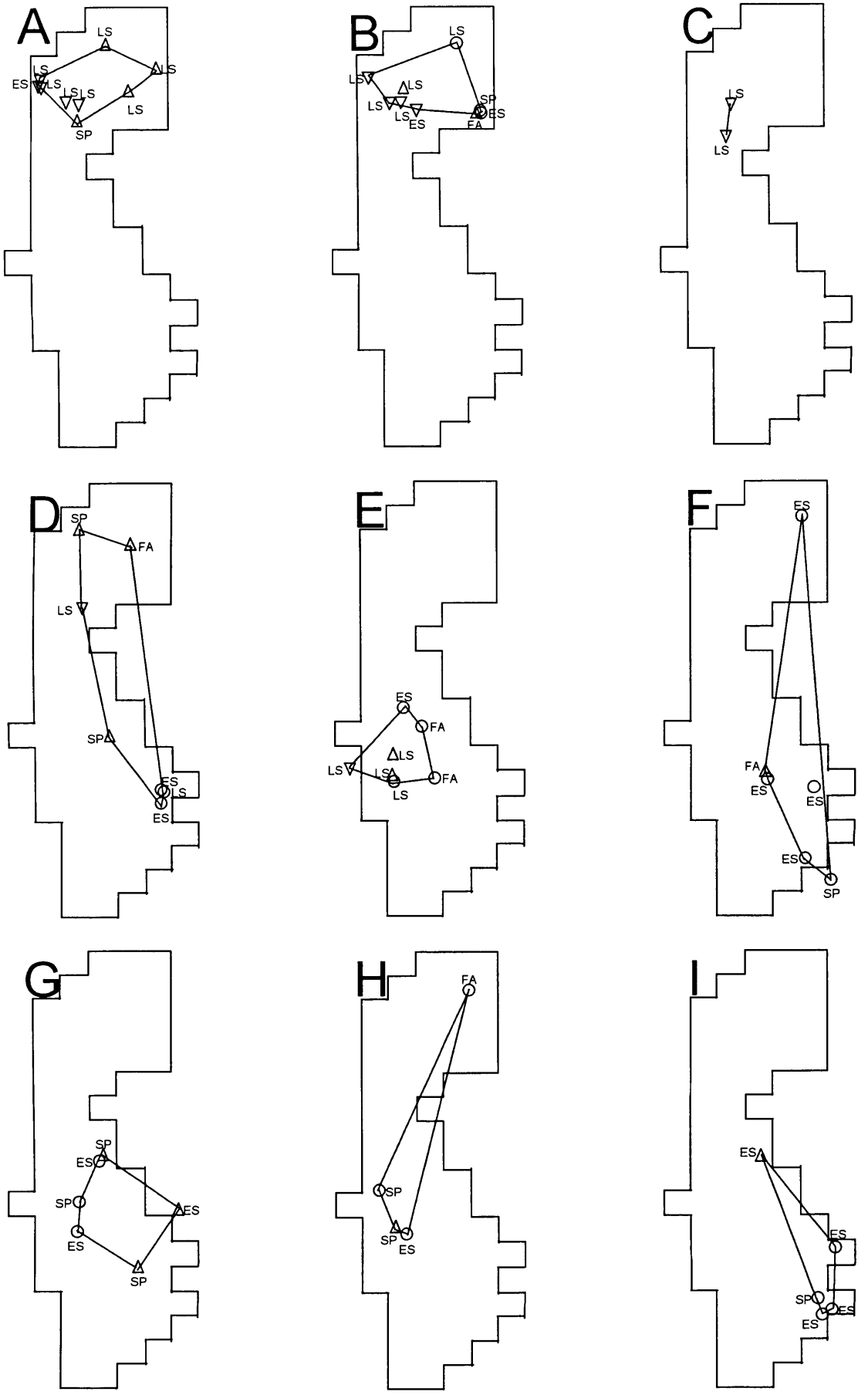


Figure 6-6. Distributions of individuals identified by 8 loci of microsatellite DNA analysis, Urahoro, Hokkaido, 2000. Each alphabet at the left corner: individual ID, SP: spring, ES: early-summer, LS: late-summer, FA: fall session samples. Open circle: samples from hair traps, upper triangle: rub trees, lower triangle: deer fences.

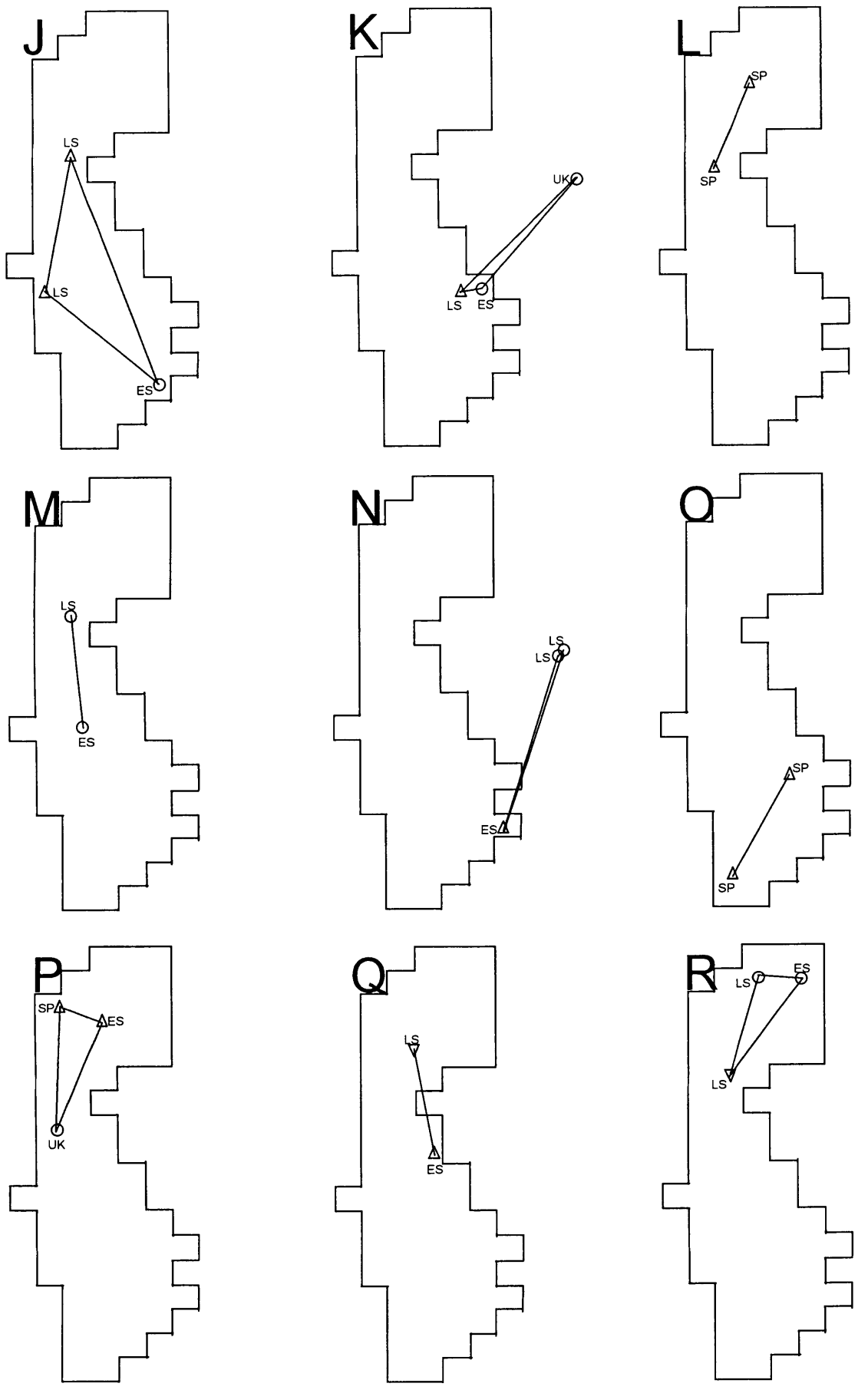


Figure 6-6 (continued). Distributions of individuals identified by 8 loci of microsatellite DNA analysis, Urahoro, Hokkaido, 2000. Each alphabet at the left corner: individual ID, SP: spring, ES: early-summer, LS: late-summer, FA: fall session samples. Open circle: samples from hair traps, upper triangle: rub trees, lower triangle: deer fences.

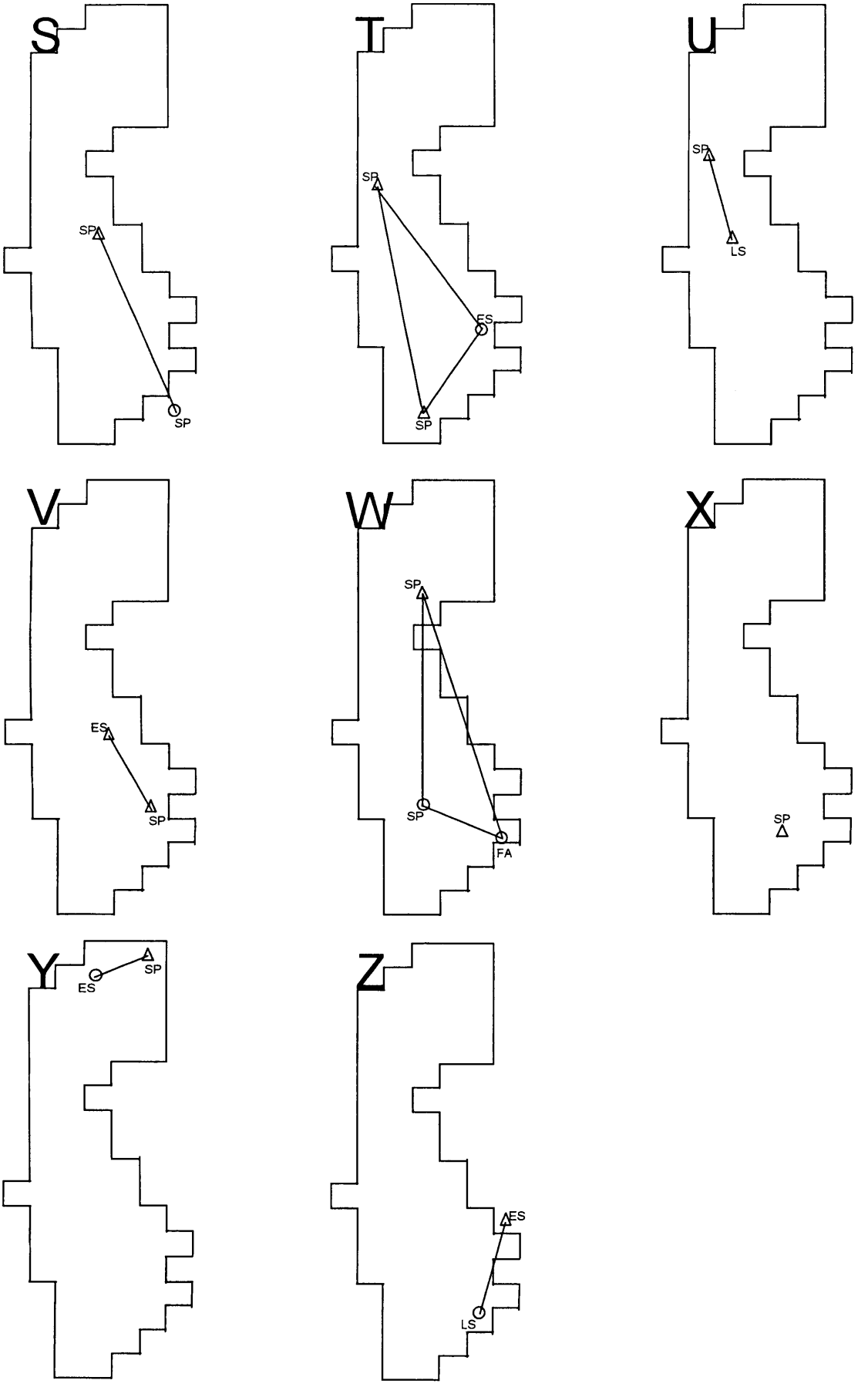
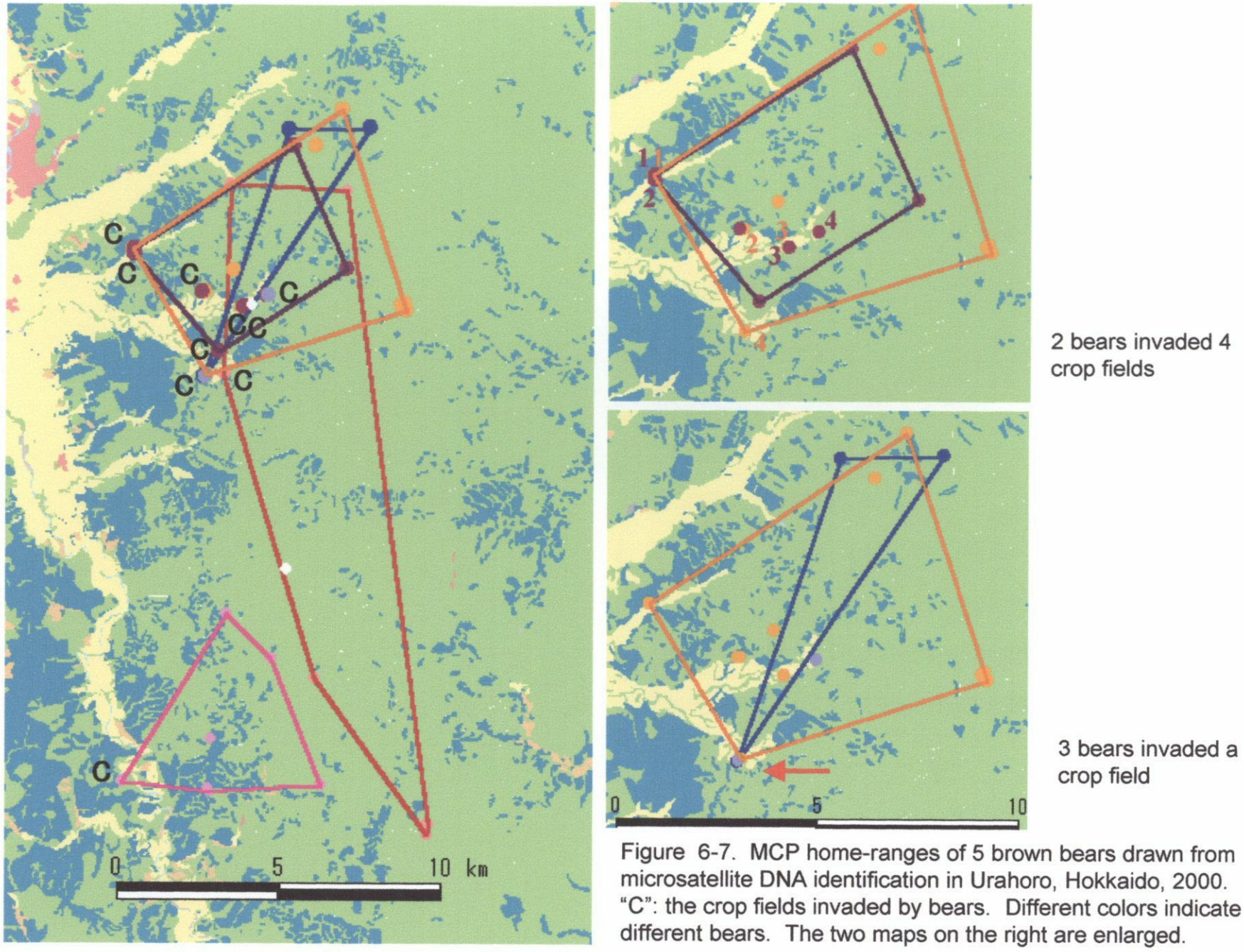


Figure 6-6 (continued). Distributions of individuals identified by 8 loci of microsatellite DNA analysis, Urahoro, Hokkaido, 2000. Each alphabet at the left corner: individual ID, SP: spring, ES: early-summer, LS: late-summer, FA: fall session samples. Open circle: samples from hair traps, upper triangle: rub trees, lower triangle: deer fences.



2 bears invaded 4 crop fields

3 bears invaded a crop field

Figure 6-7. MCP home-ranges of 5 brown bears drawn from microsatellite DNA identification in Urahoro, Hokkaido, 2000. "C": the crop fields invaded by bears. Different colors indicate different bears. The two maps on the right are enlarged.

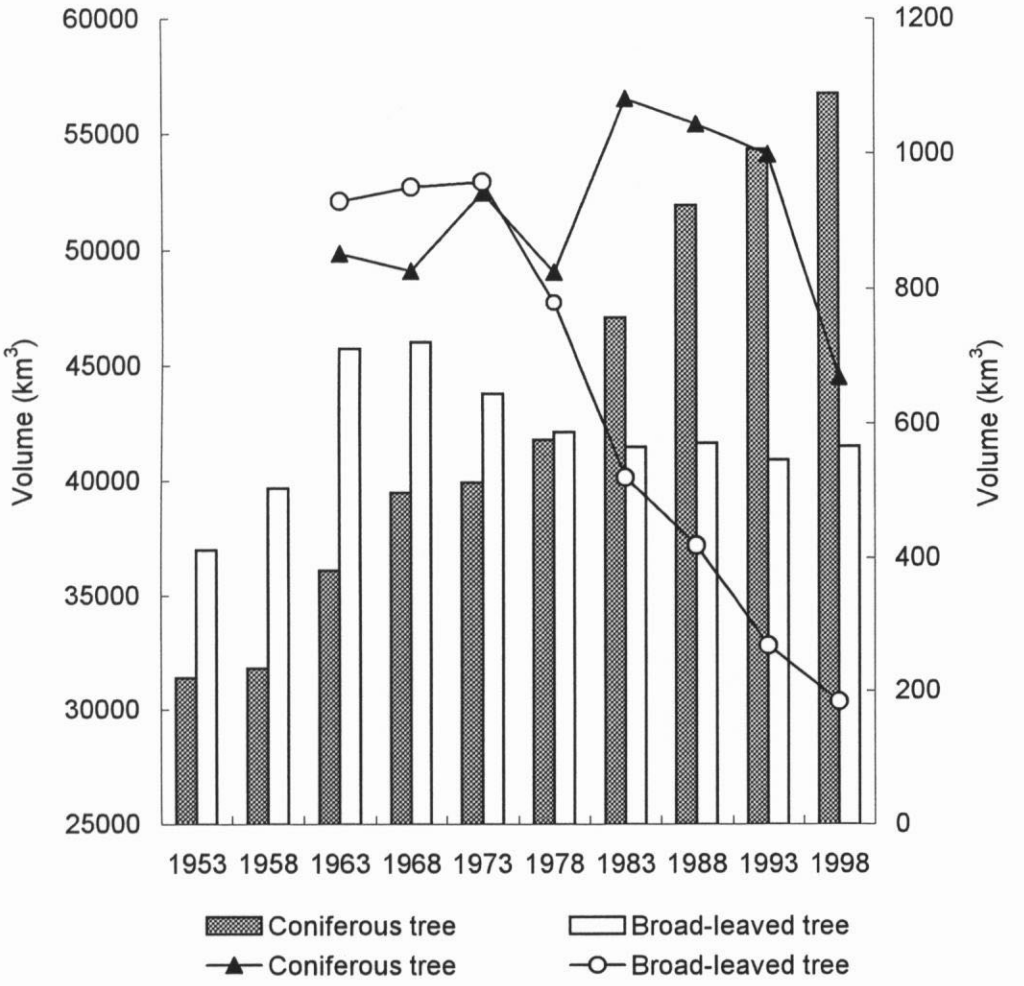


Figure 7-2. Wood volume (bars, left axis) and logged volume (solid lines, right axis) in the Tokachi subprefecture, Hokkaido, 1953-1998 (from Hokkaido Government 2000b).

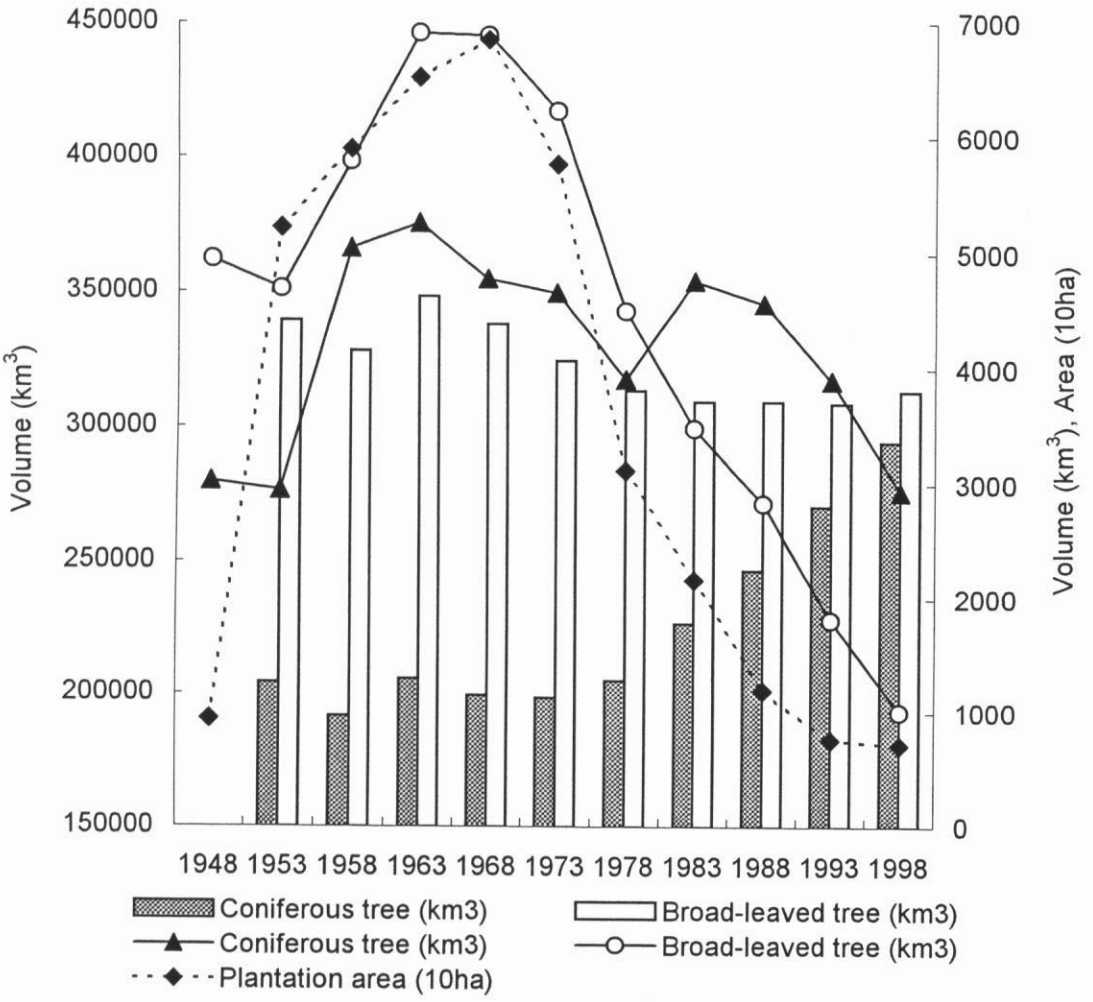


Figure 7-1. Wood volume (bars, left axis), logged volume (solid lines, right axis) and plantation area (broken line, right axis) for the whole area of Hokkaido, 1948-1998 (from Hokkaido Government 2000b).

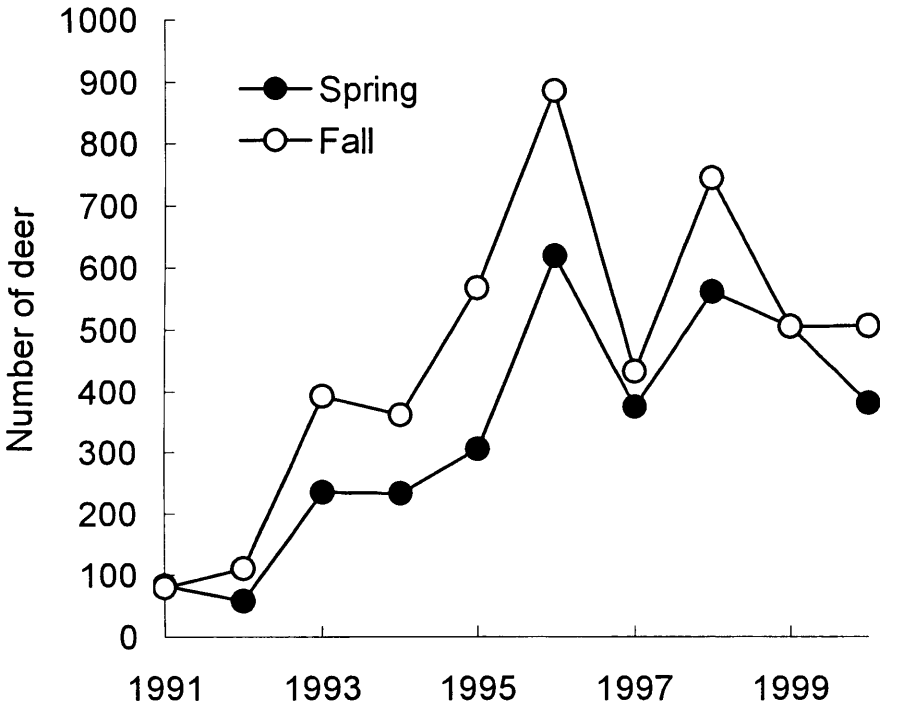


Figure 7-3. Numbers of sika deer found in spot-light censuses in Urahoro, Hokkaido, 1991-2000 (from Urahoro Town Office unpublished data). The numbers from 1991-1999 were averaged by 3-day census.

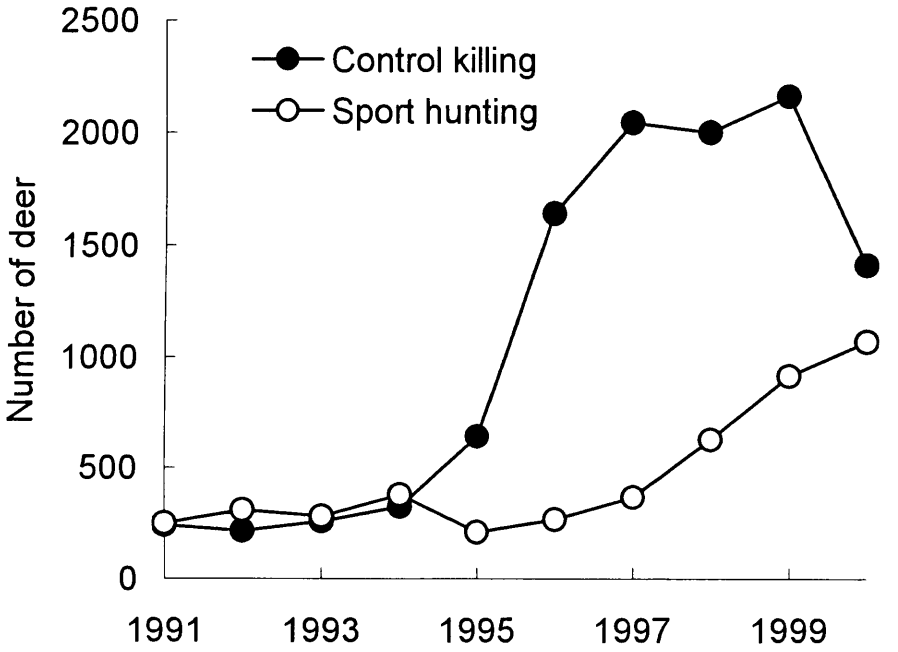


Figure 7-4. Numbers of sika deer shot by control killing and sport hunting in Urahoro, Hokkaido, 1991-2000 (from Urahoro Town Office unpublished data).

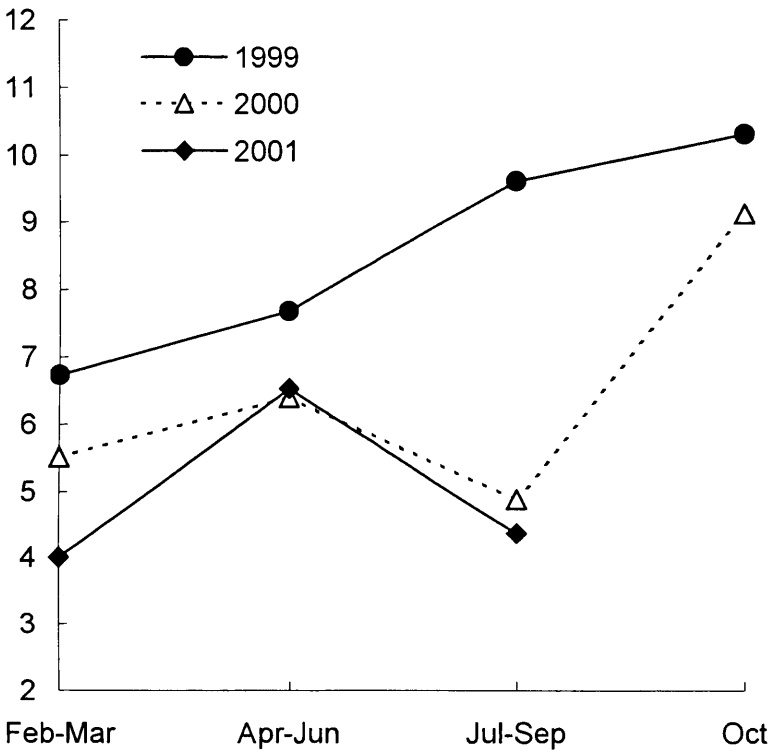


Figure 7-5. Numbers of sika deer shot by control killing per a permitted day in Urahoro, Hokkaido, 1999-2001 (from Urahoro Town Office unpublished data).

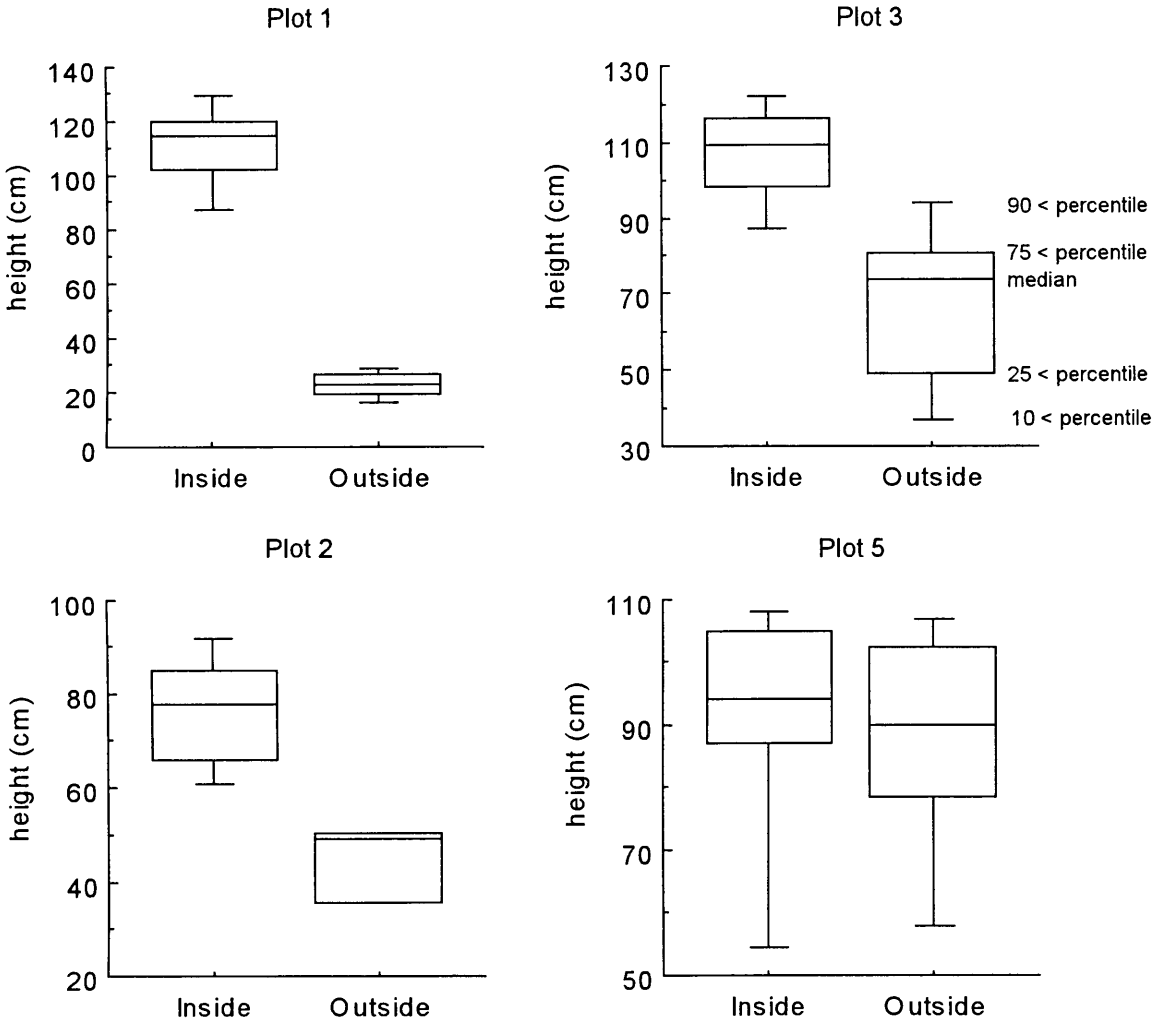


Figure 7-6. Height of *Petasites japonicus* inside and outside the deer-proof fences along the streams in Urahoro, Hokkaido, 2001.

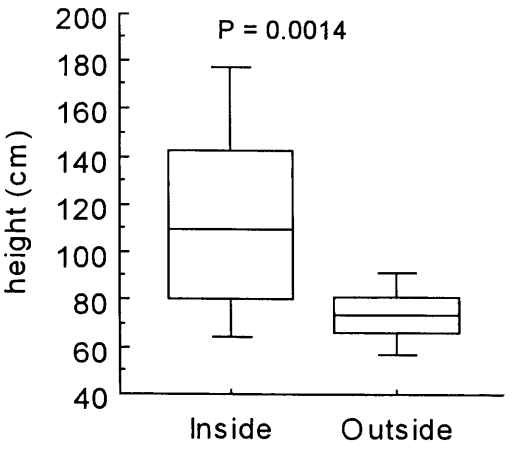


Figure 7-7. Height of *Artemisia montana* inside and outside the deer- proof fences along the streams at plot 3 in Urahoro, Hokkaido, 2001.

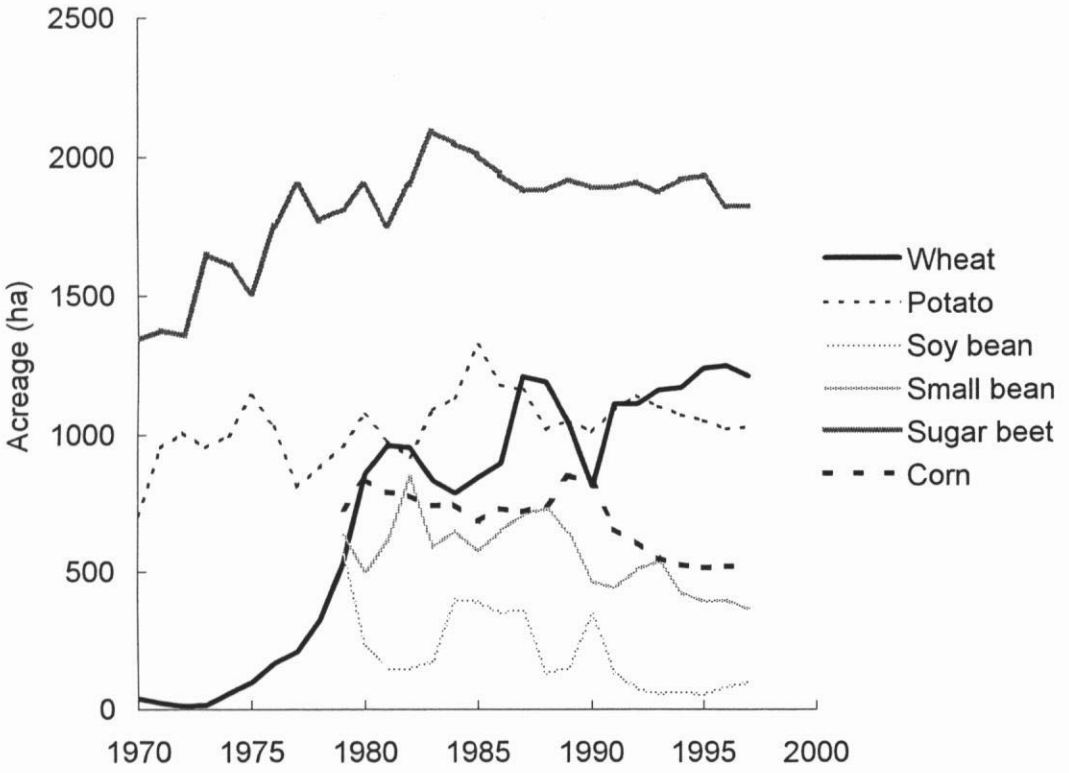


Figure 7-8. Yearly changes in the acreage of major crops in Urahoro, 1970-1997 (from Urahoro Agricultural Cooperative 1999).

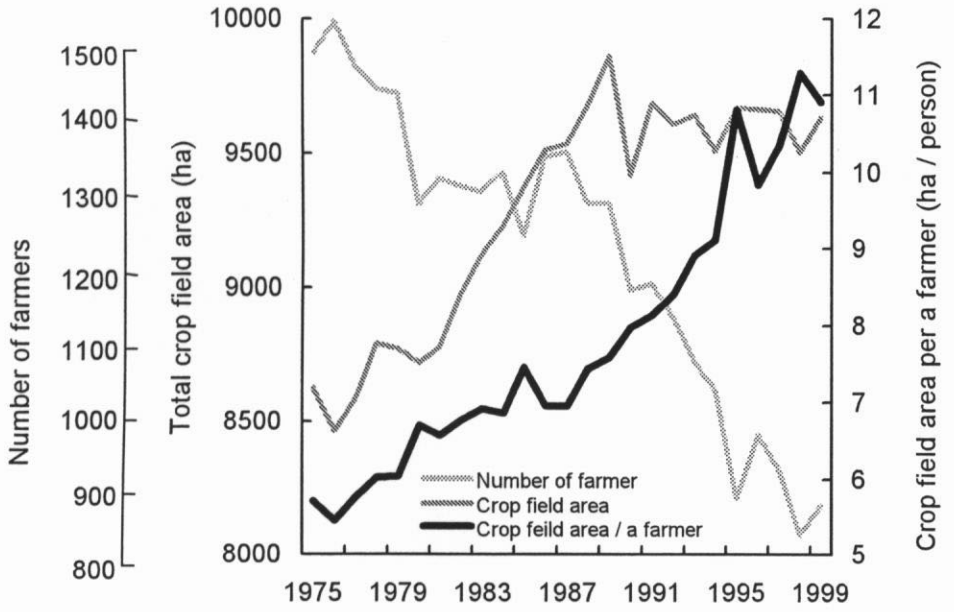


Figure 7-9. Yearly changes in the number of farmers, total area of crop fields, and crop field area per a farmer in Urahoro, Hokkaido, 1970-1995 (from Urahoro Agricultural Cooperative 1999).