Table 1. Observations of selected animals (per 100 hours hunting) by cooperating archery hunters from 1 October to 18 November 2016 statewide, east (EBR) and west (WBR) of the Blue Ridge Mountains, and on private and public lands in Virginia.

| Animal | Total Seen | Animals Seen/100 hrs. ± SE | | | | |
|---|---|---|---|---|---|---|
| | | State | EBR | WBR | Private Land | Public Land |
| Deer (antlered) | 2,010 | 13.47 ± 0.76 | 13.71 ± 0.82 | 13.03 ± 1.53 | 14.31 ± 0.81 | 6.49 ± 1.31 |
| Deer (doe) | 4,268 | 28.60 ± 1.82 | 26.53 ± 1.52 | 32.44 ± 4.25 | 29.75 ± 1.96 | 19.02 ± 3.69 |
| Deer (fawn) | 1,927 | 12.91 ± 1.25 | 11.67 ± 1.02 | 15.23 ± 2.91 | 14.05 ± 1.76 | 3.43 ± 1.11 |
| Deer (unknown) | 1,247 | 8.36 ± 0.62 | 8.09 ± 0.75 | 8.86 ± 1.06 | 8.85 ± 0.67 | 4.24 ± 1.09 |
| Gray Squirrel | 11,655 | 78.10 ± 3.91 | 82.26 ± 4.38 | 70.39 ± 7.70 | 80.96 ± 4.21 | 54.33 ± 6.97 |
| Fox Squirrel | 652 | 4.37 ± 0.65 | 1.32 ± 0.39 | 10.02 ± 1.48 | 4.65 ± 0.72 | 2.06 ± 0.77 |
| Turkey (bearded) | 816 | 5.47 ± 0.73 | 5.58 ± 0.81 | 5.26 ± 1.40 | 5.80 ± 0.79 | 2.68 ± 1.19 |
| Turkey (no beard) | 1,623 | 10.88 ± 1.31 | 9.31 ± 1.10 | 13.77 ± 3.00 | 11.26 ± 1.39 | 7.67 ± 3.92 |
| Turkey (unknown) | 1,344 | 9.01 ± 1.37 | 7.19 ± 1.48 | 12.38 ± 2.76 | 9.17 ± 1.49 | 7.61 ± 3.00 |
| Turkey (total) | 3,783 | 25.35 ± 2.28 | 22.08 ± 2.13 | 31.41 ± 5.03 | 26.24 ± 2.47 | 17.96 ± 5.59 |
| Grouse | 47 | 0.31 ± 0.12 | 0.01 ± 0.01 | 0.88 ± 0.33 | 0.22 ± 0.11 | 1.12 ± 0.63 |
| Bear (adult) | 115 | 0.77 ± 0.12 | 0.42 ± 0.13 | 1.42 ± 0.26 | 0.66 ± 0.12 | 1.68 ± 0.71 |
| Bear (cub) | 45 | 0.30 ± 0.08 | 0.19 ± 0.07 | 0.52 ± 0.17 | 0.27 ± 0.08 | 0.56 ± 0.33 |
| Bear (total) | 160 | 1.07 ± 0.18 | 0.61 ± 0.16 | 1.93 ± 0.39 | 0.93 ± 0.17 | 2.25 ± 0.88 |
| Red Fox | 128 | 0.86 ± 0.20 | 1.06 ± 0.30 | 0.48 ± 0.13 | 0.95 ± 0.22 | 0.12 ± 0.09 |
| Gray Fox | 59 | 0.40 ± 0.08 | 0.50 ± 0.12 | 0.21 ± 0.08 | 0.37 ± 0.08 | 0.62 ± 0.42 |
| Coyote | 168 | 1.13 ± 0.19 | 0.99 ± 0.22 | 1.38 ± 0.34 | 1.04 ± 0.19 | 1.81 ± 0.81 |
| Bobcat | 22 | 0.15 ± 0.04 | 0.15 ± 0.05 | 0.13 ± 0.06 | 0.16 ± 0.04 | 0.06 ± 0.06 |
| Raccoon | 247 | 1.66 ± 0.26 | 1.87 ± 0.34 | 1.26 ± 0.36 | 1.78 ± 0.28 | 0.62 ± 0.37 |
| Opossum | 41 | 0.27 ± 0.07 | 0.26 ± 0.06 | 0.31 ± 0.16 | 0.27 ± 0.07 | 0.31 ± 0.16 |
| Striped Skunk | 28 | 0.19 ± 0.04 | 0.24 ± 0.06 | 0.10 ± 0.04 | 0.20 ± 0.05 | 0.06 ± 0.06 |
| Elk | 0 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 |
| Feral Hog | 0 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 |
| Dog | 199 | 1.33 ± 0.32 | 1.30 ± 0.35 | 1.40 ± 0.64 | 1.22 ± 0.27 | 2.31 ± 1.98 |
| House Cat | 128 | 0.86 ± 0.25 | 0.52 ± 0.28 | 1.49 ± 0.50 | 0.73 ± 0.21 | 1.93 ± 1.54 |
| Hunter | 411 | 2.75 ± 0.46 | 1.52 ± 0.31 | 5.05 ± 1.09 | 2.09 ± 0.37 | 8.23 ± 2.74 |
| Total Hunters | | 288 | 194 | 113 | 270 | 52 |
| Total Hunts | | 3,515 | 2,387 | 1,128 | 3,189 | 326 |
| Total Hours | | 14,923 | 9,695 | 5,228 | 13,320 | 1,603 |
| Avg. Hrs. Per Hunt | | 4.25 ± 0.04 | 4.06 ± 0.04 | 4.63 ± 0.08 | 4.18 ± 0.04 | 4.92 ± 0.14 |

Table 2. Observations of selected animals (per 100 hours hunting) by cooperating archery hunters from 1 October to 18 November 2016 on private and public lands east (EBR) and west (WBR) of the Blue Ridge Mountains in Virginia.

| | Animals Seen/100 hrs. ± SE | | | |
|---|---|---|---|---|
| | EBR | | WBR | |
| Animal | Private Land | Public Land | Private Land | Public Land |
| Deer (antlered) | 14.35 ± 0.85 | 4.58 ± 1.70 | 14.23 ± 1.79 | 7.73 ± 1.76 |
| Deer (doe) | 27.20 ± 1.61 | 16.90 ± 2.55 | 35.18 ± 4.94 | 20.41 ± 5.91 |
| Deer (fawn) | 12.29 ± 1.07 | 2.69 ± 1.35 | 17.80 ± 3.46 | 3.92 ± 1.57 |
| Deer (unknown) | 8.52 ± 0.79 | 1.89 ± 0.82 | 9.56 ± 1.25 | 5.77 ± 1.46 |
| Gray Squirrel | 84.03 ± 4.50 | 57.01 ± 13.42 | 74.44 ± 9.15 | 52.58 ± 7.59 |
| Fox Squirrel | 1.40 ± 0.41 | 0.16 ± 0.15 | 11.55 ± 1.73 | 3.30 ± 1.22 |
| Turkey (bearded) | 5.82 ± 0.84 | 2.21 ± 1.45 | 5.78 ± 1.68 | 2.99 ± 1.72 |
| Turkey (no beard) | 9.72 ± 1.16 | 3.47 ± 2.16 | 14.54 ± 3.48 | 10.41 ± 5.41 |
| Turkey (unknown) | 7.41 ± 1.58 | 4.11 ± 1.87 | 12.94 ± 3.20 | 9.90 ± 4.64 |
| Turkey (total) | 22.94 ± 2.25 | 9.79 ± 4.23 | 33.25 ± 5.96 | 23.30 ± 7.52 |
| Grouse | 0.01 ± 0.01 | 0.00 ± 0.00 | 0.66 ± 0.33 | 1.86 ± 1.00 |
| Bear (adult) | 0.32 ± 0.09 | 1.90 ± 1.52 | 1.39 ± 0.30 | 1.55 ± 0.64 |
| Bear (cub) | 0.18 ± 0.07 | 0.32 ± 0.32 | 0.47 ± 0.18 | 0.72 ± 0.49 |
| Bear (total) | 0.50 ± 0.13 | 2.21 ± 1.57 | 1.86 ± 0.43 | 2.27 ± 1.05 |
| Red Fox | 1.14 ± 0.32 | 0.00 ± 0.00 | 0.54 ± 0.15 | 0.21 ± 0.15 |
| Gray Fox | 0.43 ± 0.11 | 1.42 ± 1.08 | 0.23 ± 0.09 | 0.10 ± 0.10 |
| Coyote | 0.97 ± 0.23 | 1.26 ± 0.88 | 1.20 ± 0.31 | 2.16 ± 1.22 |
| Bobcat | 0.15 ± 0.05 | 0.16 ± 0.15 | 0.16 ± 0.07 | 0.00 ± 0.00 |
| Raccoon | 1.91 ± 0.36 | 1.26 ± 0.87 | 1.50 ± 0.44 | 0.21 ± 0.21 |
| Opossum | 0.24 ± 0.06 | 0.47 ± 0.35 | 0.33 ± 0.19 | 0.21 ± 0.13 |
| Striped Skunk | 0.24 ± 0.07 | 0.16 ± 0.16 | 0.12 ± 0.05 | 0.00 ± 0.00 |
| Elk | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 |
| Feral Hog | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 |
| Dog | 1.38 ± 0.38 | 0.16 ± 0.16 | 0.87 ± 0.27 | 3.71 ± 3.22 |
| House Cat | 0.55 ± 0.30 | 0.00 ± 0.00 | 1.10 ± 0.21 | 3.20 ± 2.48 |
| Hunter | 1.32 ± 0.32 | 4.26 ± 1.46 | 3.73 ± 0.85 | 10.83 ± 4.12 |
| Total Hunters | 185 | 19 | 97 | 37 |
| Total Hunts | 2,261 | 126 | 928 | 200 |
| Total Hours | 9,061 | 633 | 4,258 | 970 |
| Avg. Hrs. Per Hunt | 4.01 ± 0.04 | 5.03 ± 0.23 | 4.59 ± 0.08 | 4.85 ± 0.17 |

Table 3. Observations of selected animals (per 100 hours hunting) by cooperating archery hunters from 1 October to 18 November 2016 within geographic regions of Virginia.

| | Animals Seen/ 100 hrs. ± SE | | | | |
|---|---|---|---|---|---|
| Animal | Tidewater | S. Piedmont | N. Piedmont | S. Mountain | N. Mountain |
| Deer (antlered) | 12.20 ± 1.25 | 14.52 ± 1.49 | 14.58 ± 1.52 | 14.72 ± 2.36 | 10.93 ± 1.73 |
| Deer (doe) | 19.81 ± 2.39 | 27.81 ± 2.44 | 32.13 ± 2.57 | 38.48 ± 6.89 | 24.94 ± 3.91 |
| Deer (fawn) | 8.72 ± 1.50 | 10.61 ± 1.74 | 15.28 ± 1.83 | 17.00 ± 4.79 | 13.03 ± 2.69 |
| Deer (unknown) | 7.29 ± 1.22 | 6.54 ± 0.98 | 9.96 ± 1.43 | 8.22 ± 1.32 | 9.64 ± 1.75 |
| Gray Squirrel | 75.36 ± 5.61 | 75.24 ± 7.78 | 93.95 ± 8.38 | 77.90 ± 12.80 | 61.07 ± 6.22 |
| Fox Squirrel | 0.20 ± 0.11 | 2.79 ± 0.93 | 1.36 ± 0.75 | 9.09 ± 1.76 | 11.19 ± 2.51 |
| Turkey (bearded) | 6.23 ± 1.51 | 5.81 ± 1.61 | 4.79 ± 1.13 | 6.81 ± 2.32 | 3.34 ± 1.20 |
| Turkey (no beard) | 10.72 ± 1.90 | 9.60 ± 2.18 | 7.75 ± 1.50 | 10.33 ± 2.54 | 18.04 ± 5.95 |
| Turkey (unknown) | 6.12 ± 1.54 | 8.91 ± 4.41 | 7.00 ± 1.80 | 12.68 ± 4.16 | 12.00 ± 3.47 |
| Turkey (total) | 23.06 ± 3.12 | 24.32 ± 5.35 | 19.54 ± 2.82 | 29.81 ± 6.51 | 33.38 ± 7.95 |
| Grouse | 0.00 ± 0.00 | 0.04 ± 0.04 | 0.00 ± 0.00 | 0.28 ± 0.13 | 1.63 ± 0.71 |
| Bear (adult) | 0.00 ± 0.00 | 0.54 ± 0.16 | 0.75 ± 0.34 | 1.11 ± 0.30 | 1.80 ± 0.44 |
| Bear (cub) | 0.00 ± 0.00 | 0.31 ± 0.13 | 0.28 ± 0.15 | 0.62 ± 0.27 | 0.39 ± 0.21 |
| Bear (total) | 0.00 ± 0.00 | 0.85 ± 0.25 | 1.02 ± 0.39 | 1.73 ± 0.51 | 2.19 ± 0.60 |
| Red Fox | 0.17 ± 0.12 | 0.50 ± 0.23 | 2.32 ± 0.77 | 0.45 ± 0.20 | 0.51 ± 0.14 |
| Gray Fox | 0.63 ± 0.19 | 0.62 ± 0.30 | 0.28 ± 0.13 | 0.14 ± 0.07 | 0.30 ± 0.14 |
| Coyote | 0.69 ± 0.26 | 1.01 ± 0.33 | 1.27 ± 0.47 | 1.28 ± 0.54 | 1.50 ± 0.38 |
| Bobcat | 0.24 ± 0.11 | 0.21 ± 0.10 | 0.10 ± 0.05 | 0.13 ± 0.06 | 0.15 ± 0.07 |
| Raccoon | 2.86 ± 0.78 | 0.66 ± 0.23 | 1.77 ± 0.39 | 1.21 ± 0.55 | 1.33 ± 0.46 |
| Opossum | 0.34 ± 0.11 | 0.12 ± 0.07 | 0.28 ± 0.13 | 0.45 ± 0.27 | 0.13 ± 0.07 |
| Striped Skunk | 0.17 ± 0.09 | 0.35 ± 0.18 | 0.22 ± 0.09 | 0.07 ± 0.05 | 0.13 ± 0.07 |
| Elk | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 |
| Feral Hog | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 |
| Dog | 0.49 ± 0.23 | 2.09 ± 1.00 | 1.52 ± 0.60 | 2.21 ± 1.14 | 0.39 ± 0.20 |
| House Cat | 0.20 ± 0.11 | 0.12 ± 0.07 | 1.11 ± 0.72 | 2.07 ± 0.88 | 0.77 ± 0.24 |
| Hunter | 1.80 ± 0.58 | 1.12 ± 0.54 | 1.52 ± 0.46 | 5.84 ± 1.50 | 4.07 ± 1.58 |
| Total Hunters | 63 | 72 | 89 | 61 | 53 |
| Total Hunts | 843 | 651 | 893 | 588 | 540 |
| Total Hours | 3,499 | 2,582 | 3,613 | 2,895 | 2,334 |
| Avg. Hrs. Per Hunt | 4.25 ± 0.07 | 3.97 ± 0.09 | 4.05 ± 0.07 | 4.92 ± 0.11 | 4.32 ± 0.10 |

Table 4. Observations of selected animals (per 100 hours hunting) by cooperating archery hunters by week from 1 October to 18 November 2016 in Virginia.

| | Animals Seen/100 hrs. + SE | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Animal | Day 1 (10/1) | Week 1 (10/3-8) | Week 2 (10/10-15) | Week 3 (10/17-22) | Week 4 (10/24-29) | Week 5 (10/31-11/5) | Week 6 (11/7-12) | Week 7 (11/14-18) |
| Deer (antlered) | 13.95 ± 1.77 | 11.10 ± 1.26 | 12.38 ± 1.20 | 10.99 ± 1.17 | 11.71 ± 1.06 | 15.08 ± 1.32 | 16.31 ± 1.44 | 16.54 ± 1.68 |
| Deer (doe) | 32.83 ± 3.80 | 32.67 ± 3.02 | 32.77 ± 2.23 | 25.09 ± 2.35 | 24.33 ± 2.28 | 24.51 ± 3.14 | 26.98 ± 2.91 | 37.74 ± 3.87 |
| Deer (fawn) | 15.92 ± 2.04 | 15.88 ± 2.21 | 14.26 ± 1.50 | 10.05 ± 1.51 | 11.16 ± 1.52 | 11.10 ± 2.04 | 11.83 ± 1.86 | 15.29 ± 2.74 |
| Deer (unknown) | 10.00 ± 2.16 | 9.03 ± 1.33 | 9.54 ± 1.39 | 7.80 ± 1.10 | 8.79 ± 1.11 | 7.56 ± 1.06 | 7.47 ± 1.07 | 7.09 ± 1.40 |
| Gray Squirrel | 62.33 ± 5.35 | 72.03 ± 5.30 | 79.65 ± 5.84 | 74.47 ± 4.88 | 87.30 ± 4.82 | 94.82 ± 10.98 | 73.83 ± 5.99 | 65.13 ± 6.54 |
| Fox Squirrel | 5.31 ± 1.24 | 5.15 ± 1.06 | 4.33 ± 1.07 | 4.12 ± 1.02 | 3.46 ± 0.77 | 3.35 ± 0.72 | 4.57 ± 1.10 | 5.70 ± 1.38 |
| Turkey (bearded) | 4.69 ± 1.88 | 6.53 ± 1.46 | 5.45 ± 1.08 | 4.62 ± 1.31 | 7.52 ± 1.79 | 4.02 ± 0.84 | 4.77 ± 1.09 | 5.63 ± 2.06 |
| Turkey (no beard) | 10.49 ± 2.99 | 13.23 ± 2.57 | 10.46 ± 2.46 | 9.11 ± 3.62 | 14.90 ± 3.32 | 11.10 ± 2.42 | 7.84 ± 1.84 | 9.31 ± 2.46 |
| Turkey (unknown) | 10.00 ± 3.63 | 9.14 ± 2.76 | 8.97 ± 2.89 | 9.80 ± 2.41 | 10.75 ± 3.32 | 9.53 ± 2.00 | 6.77 ± 1.40 | 7.79 ± 2.51 |
| Turkey (total) | 25.18 ± 4.75 | 28.90 ± 4.09 | 24.88 ± 4.16 | 23.53 ± 5.62 | 33.17 ± 5.50 | 24.65 ± 3.49 | 19.38 ± 2.81 | 22.73 ± 4.73 |
| Grouse | 0.12 ± 0.12 | 0.32 ± 0.15 | 0.16 ± 0.08 | 0.19 ± 0.11 | 0.96 ± 0.64 | 0.34 ± 0.17 | 0.12 ± 0.09 | 0.14 ± 0.10 |
| Bear (adult) | 0.86 ± 0.40 | 1.54 ± 0.36 | 1.00 ± 0.25 | 0.69 ± 0.27 | 0.59 ± 0.19 | 0.57 ± 0.18 | 0.54 ± 0.20 | 0.35 ± 0.15 |
| Bear (cub) | 0.49 ± 0.30 | 0.64 ± 0.28 | 0.48 ± 0.24 | 0.19 ± 0.14 | 0.14 ± 0.14 | 0.19 ± 0.14 | 0.29 ± 0.14 | 0.00 ± 0.00 |
| Bear (total) | 1.36 ± 0.60 | 2.18 ± 0.53 | 1.48 ± 0.44 | 0.87 ± 0.36 | 0.73 ± 0.28 | 0.77 ± 0.26 | 0.83 ± 0.27 | 0.35 ± 0.15 |
| Red Fox | 0.86 ± 0.54 | 0.96 ± 0.27 | 0.80 ± 0.25 | 0.75 ± 0.32 | 0.68 ± 0.27 | 1.20 ± 0.37 | 0.95 ± 0.48 | 0.56 ± 0.28 |
| Gray Fox | 0.12 ± 0.12 | 0.69 ± 0.35 | 0.48 ± 0.17 | 0.25 ± 0.12 | 0.36 ± 0.14 | 0.38 ± 0.15 | 0.42 ± 0.20 | 0.21 ± 0.17 |
| Coyote | 1.73 ± 0.75 | 1.81 ± 0.57 | 1.40 ± 0.36 | 1.00 ± 0.31 | 0.87 ± 0.26 | 1.01 ± 0.37 | 1.12 ± 0.35 | 0.14 ± 0.10 |
| Bobcat | 0.25 ± 0.17 | 0.11 ± 0.07 | 0.28 ± 0.12 | 0.00 ± 0.00 | 0.18 ± 0.11 | 0.05 ± 0.05 | 0.21 ± 0.09 | 0.07 ± 0.07 |

Table 4 (continued). Observations of selected animals (per 100 hours of hunting) by cooperating archery hunters by week from 1 October to 18 November 2016 in Virginia.

| | Animals Seen/100 hrs. + SE | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Animal | Day 1 (10/1) | Week 1 (10/3-8) | Week 2 (10/10-15) | Week 3 (10/17-22) | Week 4 (10/24-29) | Week 5 (10/31-11/5) | Week 6 (11/7-12) | Week 7 (11/14-18) |
| Raccoon | 1.23 ± 0.60 | 1.49 ± 0.45 | 2.60 ± 0.59 | 2.06 ± 0.50 | 1.69 ± 0.44 | 1.96 ± 0.54 | 1.04 ± 0.35 | 0.56 ± 0.30 |
| Opossum | 0.49 ± 0.24 | 0.37 ± 0.14 | 0.24 ± 0.11 | 0.37 ± 0.17 | 0.36 ± 0.18 | 0.14 ± 0.08 | 0.08 ± 0.06 | 0.35 ± 0.20 |
| Striped Skunk | 0.49 ± 0.24 | 0.16 ± 0.12 | 0.24 ± 0.10 | 0.19 ± 0.11 | 0.09 ± 0.06 | 0.10 ± 0.07 | 0.17 ± 0.10 | 0.28 ± 0.17 |
| Elk | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 |
| Feral Hog | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 | 0.00 ± 0.00 |
| Dog | 1.23 ± 0.71 | 1.81 ± 0.86 | 0.96 ± 0.41 | 1.25 ± 0.37 | 1.46 ± 0.46 | 2.30 ± 0.75 | 1.00 ± 0.32 | 0.49 ± 0.29 |
| House Cat | 0.62 ± 0.32 | 1.75 ± 0.72 | 0.48 ± 0.16 | 0.81 ± 0.28 | 0.96 ± 0.37 | 0.96 ± 0.40 | 0.37 ± 0.15 | 1.04 ± 0.47 |
| Hunter | 3.33 ± 0.97 | 2.71 ± 0.76 | 2.40 ± 0.56 | 2.62 ± 0.64 | 2.51 ± 0.56 | 3.11 ± 0.68 | 3.57 ± 0.85 | 1.74 ± 0.67 |
| Total Hunters | 156 | 200 | 235 | 197 | 213 | 205 | 163 | 120 |
| Total Hunts | 158 | 474 | 607 | 424 | 558 | 474 | 509 | 311 |
| Total Hours | 810 | 1,883 | 2,496 | 1,602 | 2,195 | 2,089 | 2,409 | 1,439 |
| Avg. Hrs. Per Hunt | 5.13 ± 0.20 | 3.97 ± 0.10 | 4.11 ± 0.09 | 3.78 ± 0.09 | 3.93 ± 0.08 | 4.41 ± 0.11 | 4.73 ± 0.11 | 4.63 ± 0.14 |

Table 5. Doe-buck and fawn-doe ratio estimates (a) east and west of the Blue Ridge Mountains, (b) by land ownership, (c) by region, and (d) by week of survey season based on cooperating archery hunter observations in Virginia from 1 October to 18 November 2016.

(a)

| Ratio | Statewide | East of BR | West of BR |
|---|---|---|---|
| Doe: Buck | 2.12 | 1.94 | 2.49 |
| Fawn: Doe | 0.45 | 0.44 | 0.47 |

(b)

| Ratio | Private | Public |
|---|---|---|
| Doe: Buck | 2.08 | 2.93 |
| Fawn: Doe | 0.47 | 0.18 |

(c)

| Ratio | Tidewater | S. Piedmont | N. Piedmont | S. Mountain | N. Mountain |
|---|---|---|---|---|---|
| Doe: Buck | 1.62 | 1.91 | 2.20 | 2.62 | 2.28 |
| Fawn: Doe | 0.44 | 0.38 | 0.48 | 0.44 | 0.52 |

(d)

| Ratio | Day 1 | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 |
|---|---|---|---|---|---|---|---|---|
| Doe: Buck | 2.35 | 2.94 | 2.65 | 2.28 | 2.08 | 1.63 | 1.65 | 1.98 |
| Fawn: Doe | 0.48 | 0.49 | 0.44 | 0.40 | 0.46 | 0.45 | 0.44 | 0.47 |

Table 6. Statewide total observations and total observations per 100 hunts of miscellaneous animals by cooperating archery hunters 1 October to 18 November 2016 in Virginia.

| Animal | Total Observations | Observations / 100 Hunts |
|---|---|---|
| Bats | 4 | 0.11 |
| Beaver | 6 | 0.17 |
| Buzzard | 7 | 0.20 |
| Chipmunk | 30 | 0.85 |
| Crow | 127 | 3.61 |
| Doves | 4 | 0.11 |
| Ducks | 189 | 5.38 |
| Eagle | 94 | 2.67 |
| Falcon | 1 | 0.03 |
| Flying Squirrels | 0 | 0.00 |
| Geese | 1,258 | 35.79 |
| Groundhog | 37 | 1.05 |
| Hawk | 121 | 3.44 |
| Herons | 6 | 0.17 |
| Mink | 1 | 0.03 |
| Miscellaneous Birds | 29 | 0.83 |
| Mouse | 4 | 0.11 |
| Muskrat | 1 | 0.03 |
| Nutria | 0 | 0.00 |
| Otter | 9 | 0.26 |
| Owl | 42 | 1.19 |
| Pheasant | 0 | 0.00 |
| Quail | 14 | 0.40 |
| Rabbit | 49 | 1.39 |
| Red Squirrel | 0 | 0.00 |
| Shrew | 0 | 0.00 |
| Sika & Other Deer | 0 | 0.00 |
| Snake | 2 | 0.06 |
| Snipe | 0 | 0.00 |
| Turtles | 1 | 0.03 |
| Weasel | 0 | 0.00 |
| Woodcock | 8 | 0.23 |

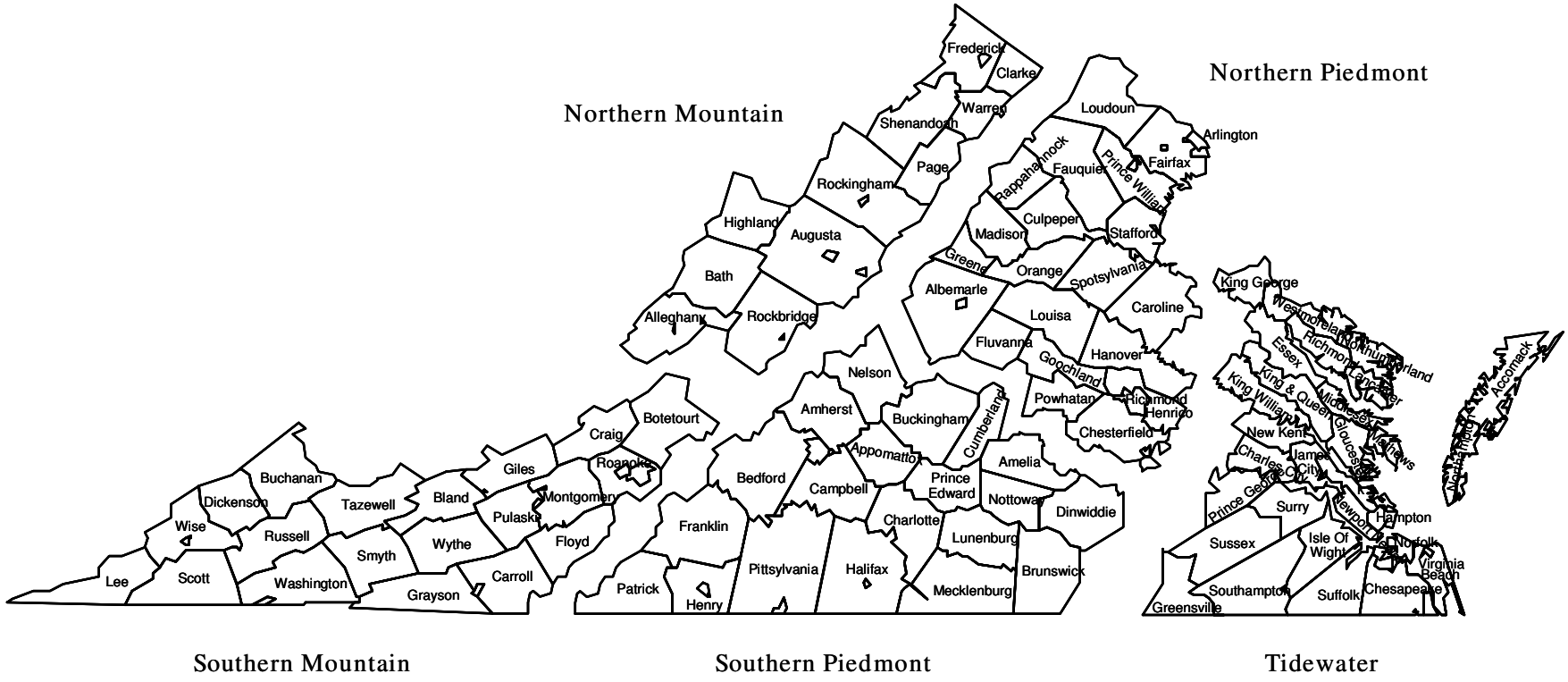


Figure 1. Geographic regions used for analyses in this report.

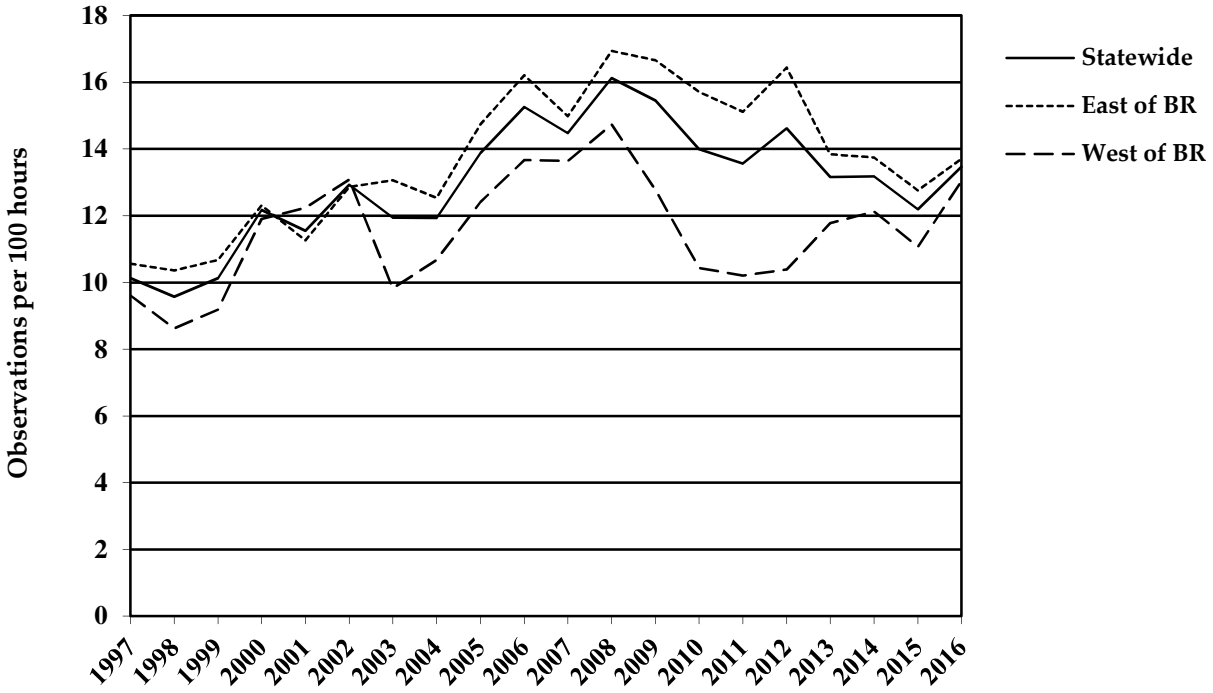


Figure 2. Antlered deer observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

Figure 3. Antlered deer observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

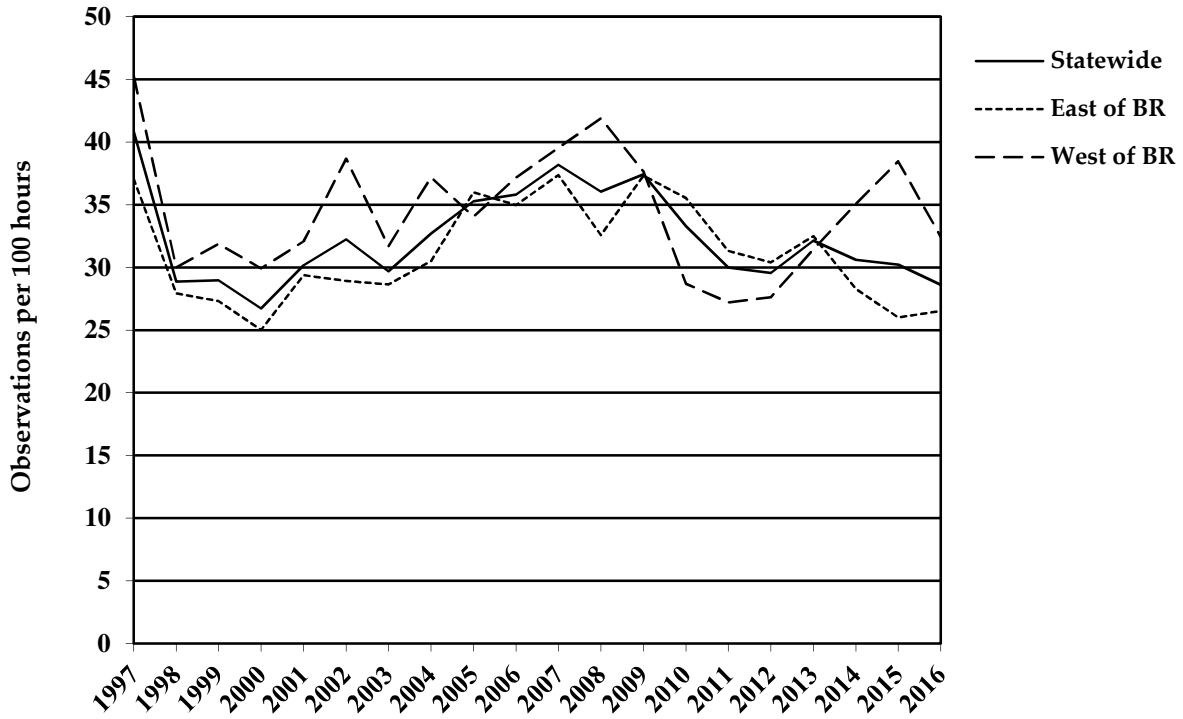


Figure 4. Doe deer observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

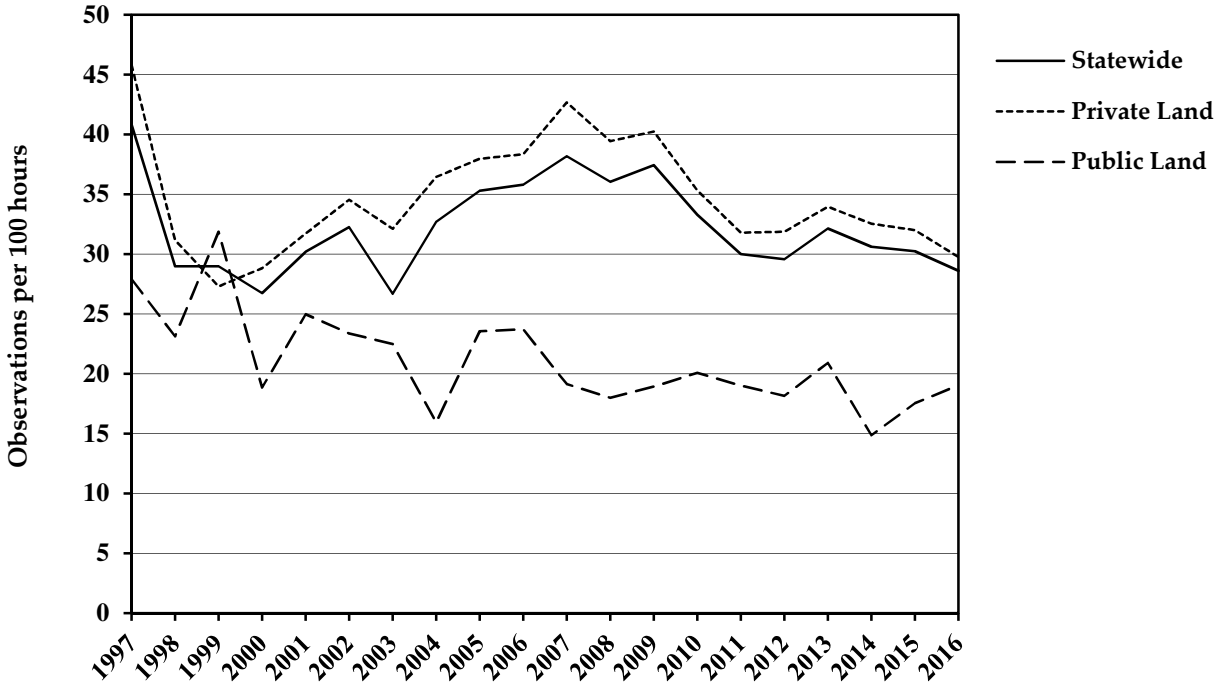


Figure 5. Doe deer observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

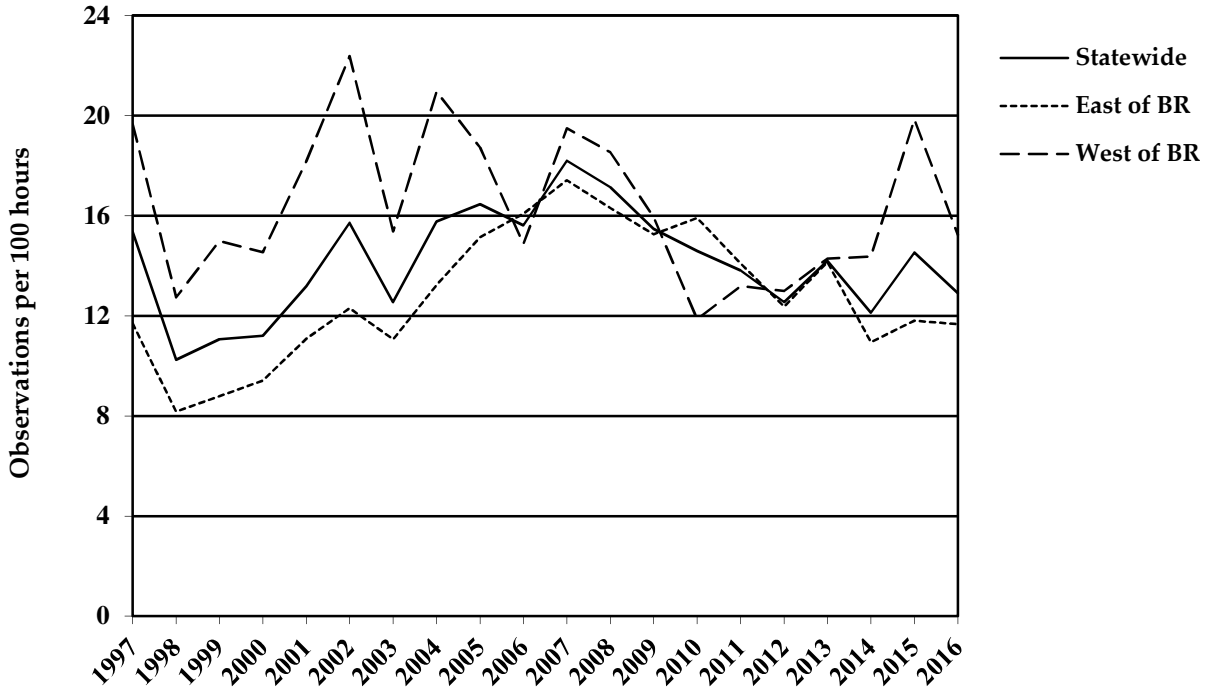


Figure 6. Fawns observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

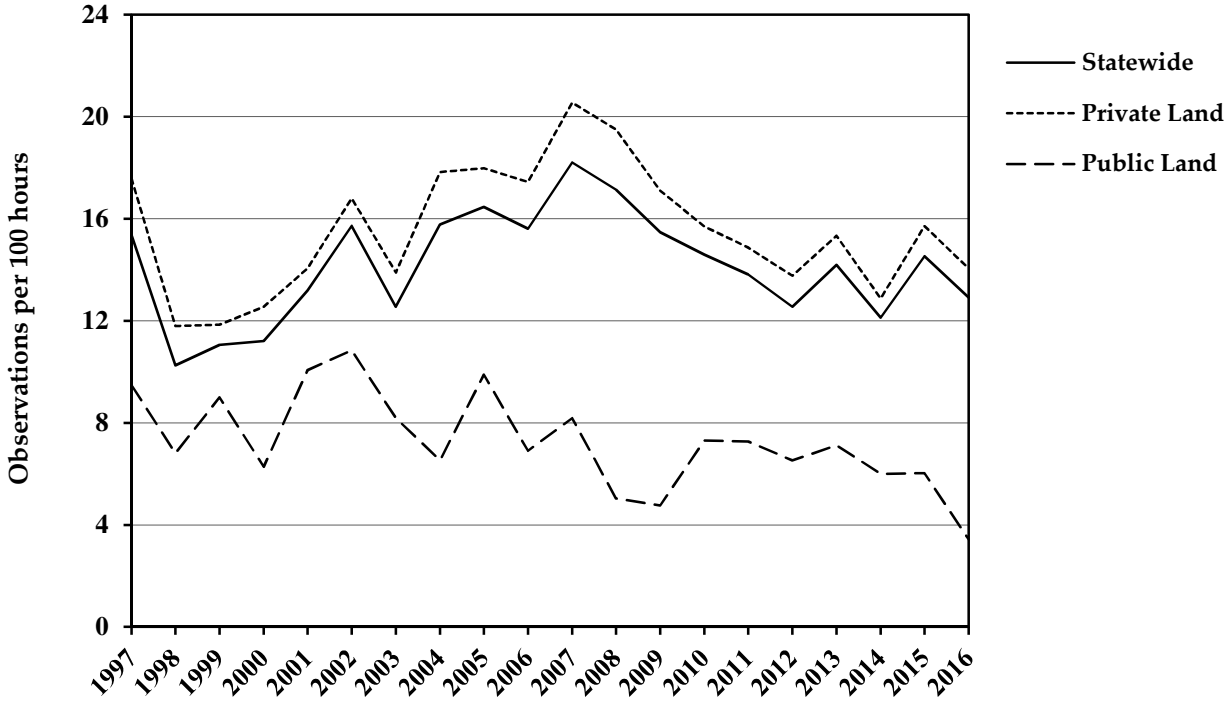


Figure 7. Fawns observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

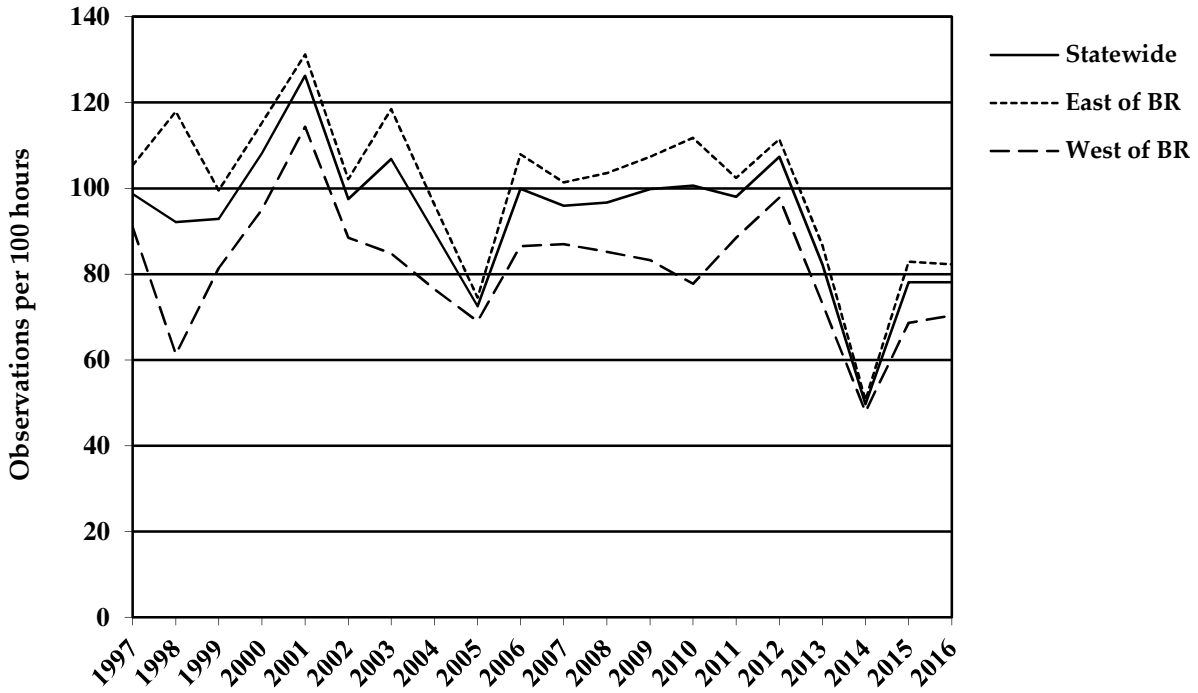


Figure 8. Gray squirrels observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

Figure 9. Gray squirrels observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

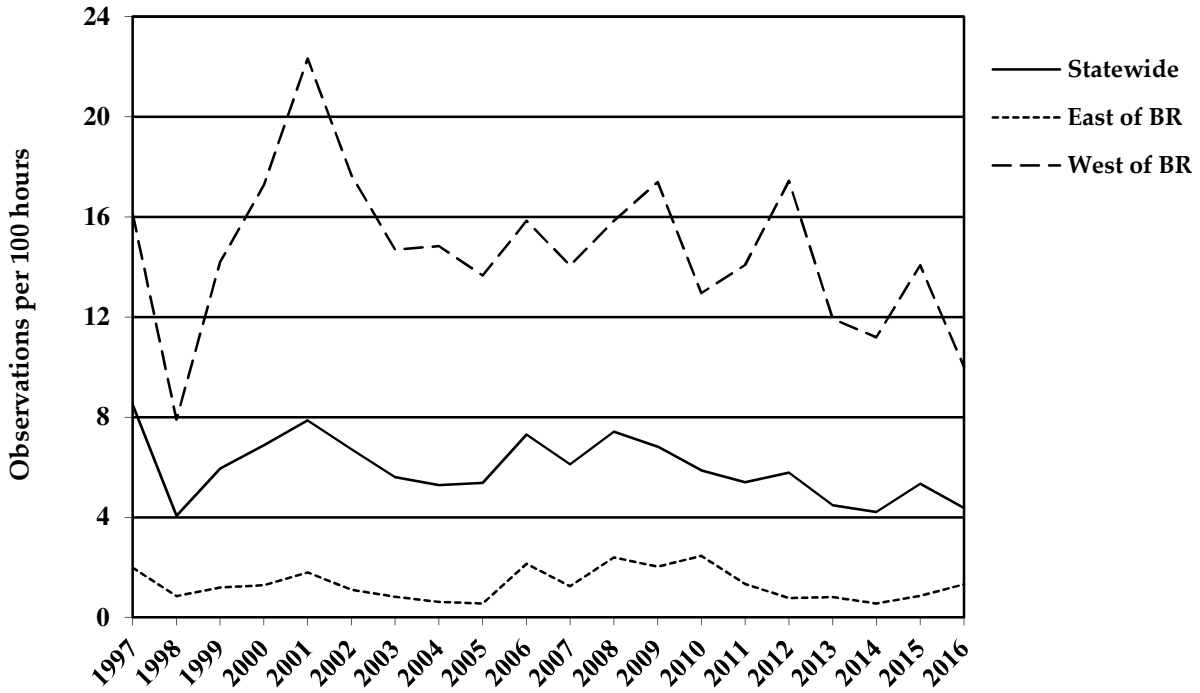


Figure 10. Fox squirrels observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

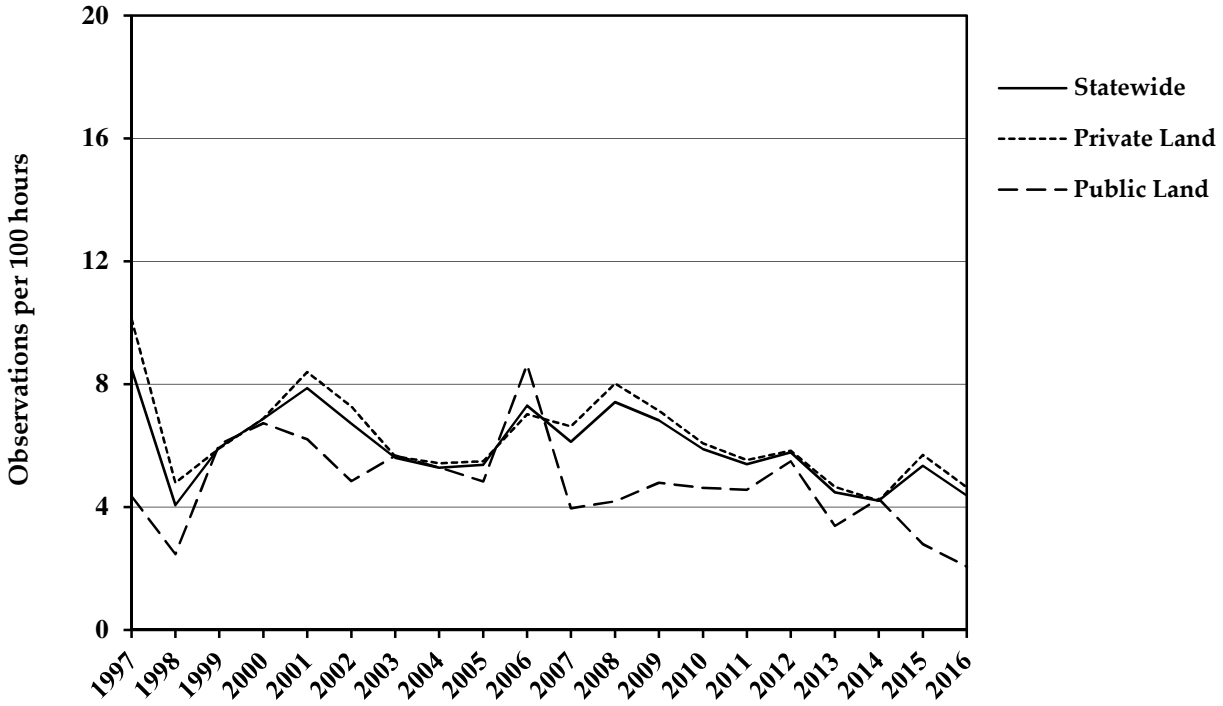


Figure 11. Fox squirrels observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

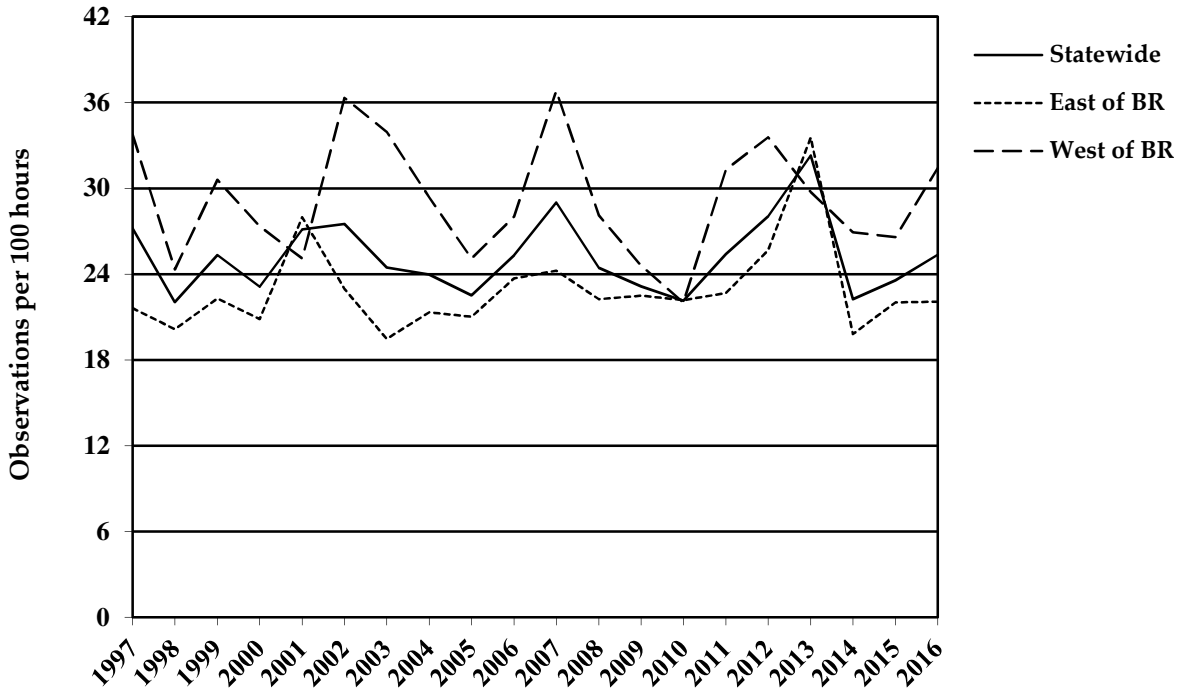


Figure 12. Wild turkeys observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

Figure 13. Wild turkeys observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

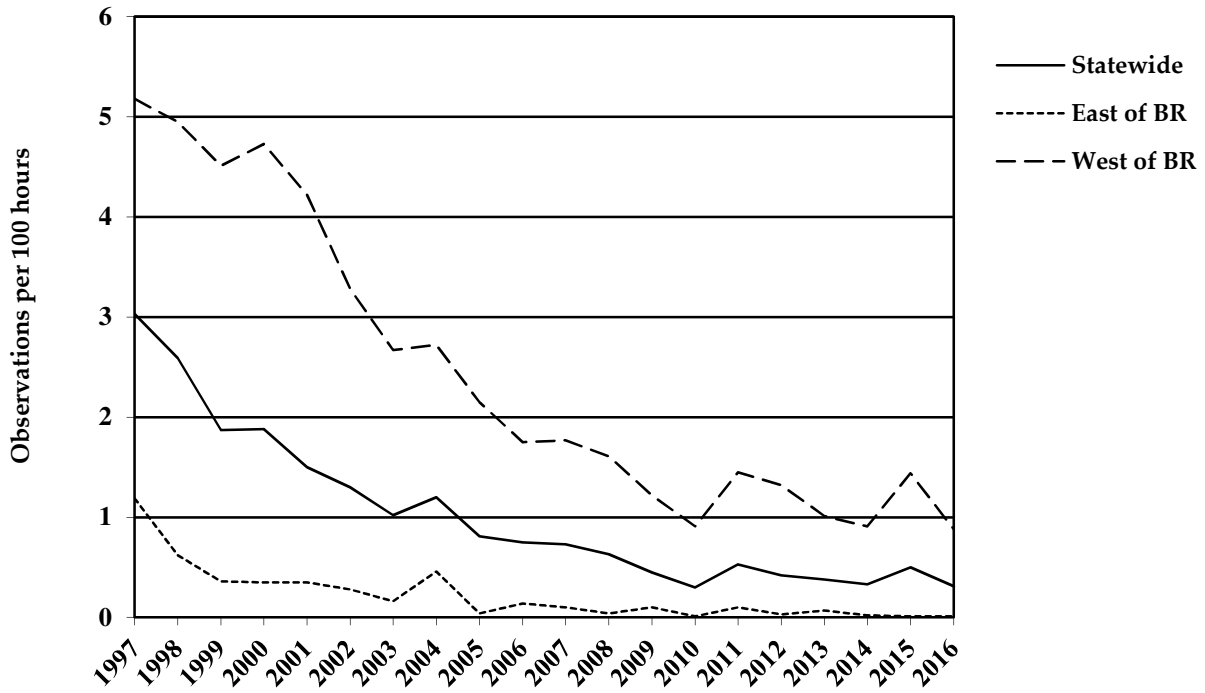


Figure 14. Ruffed grouse observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

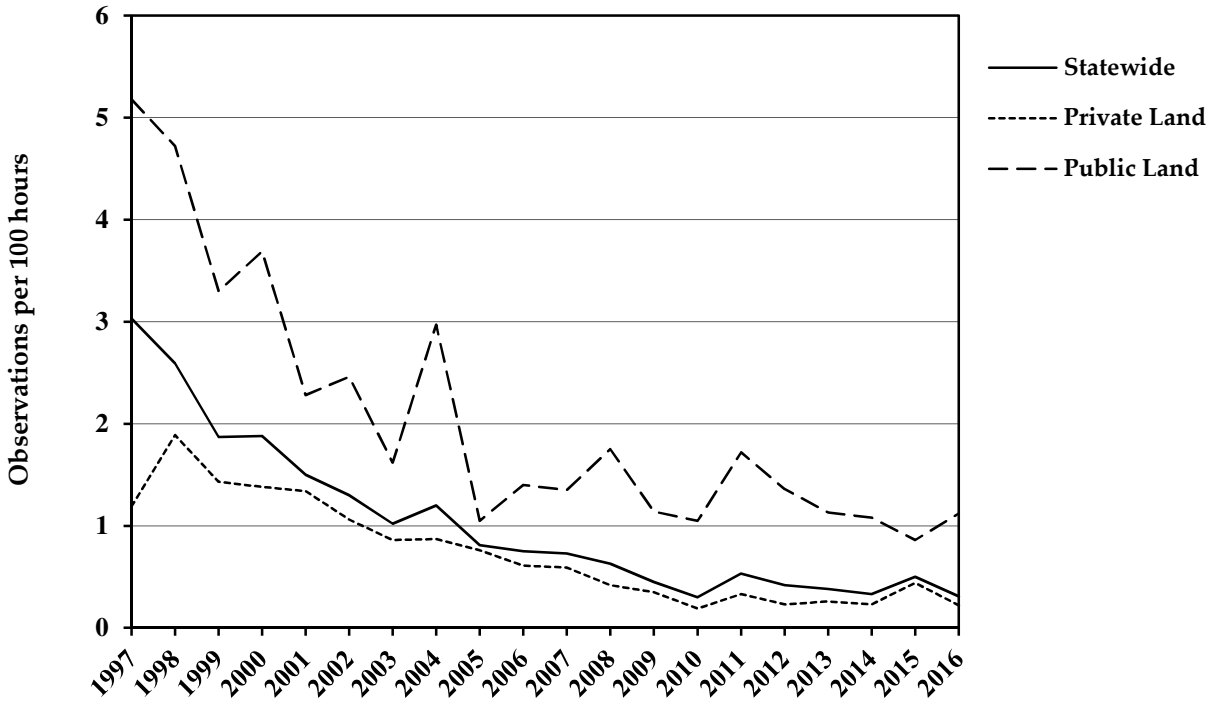


Figure 15. Ruffed grouse observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

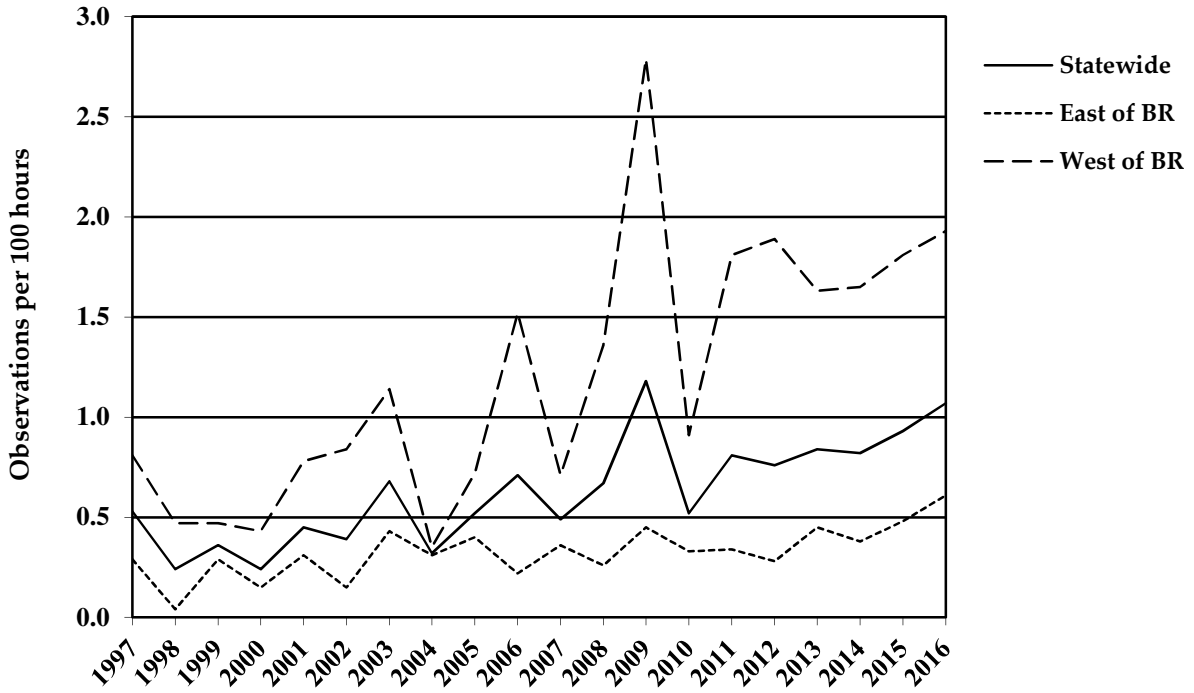


Figure 16. Black bears observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

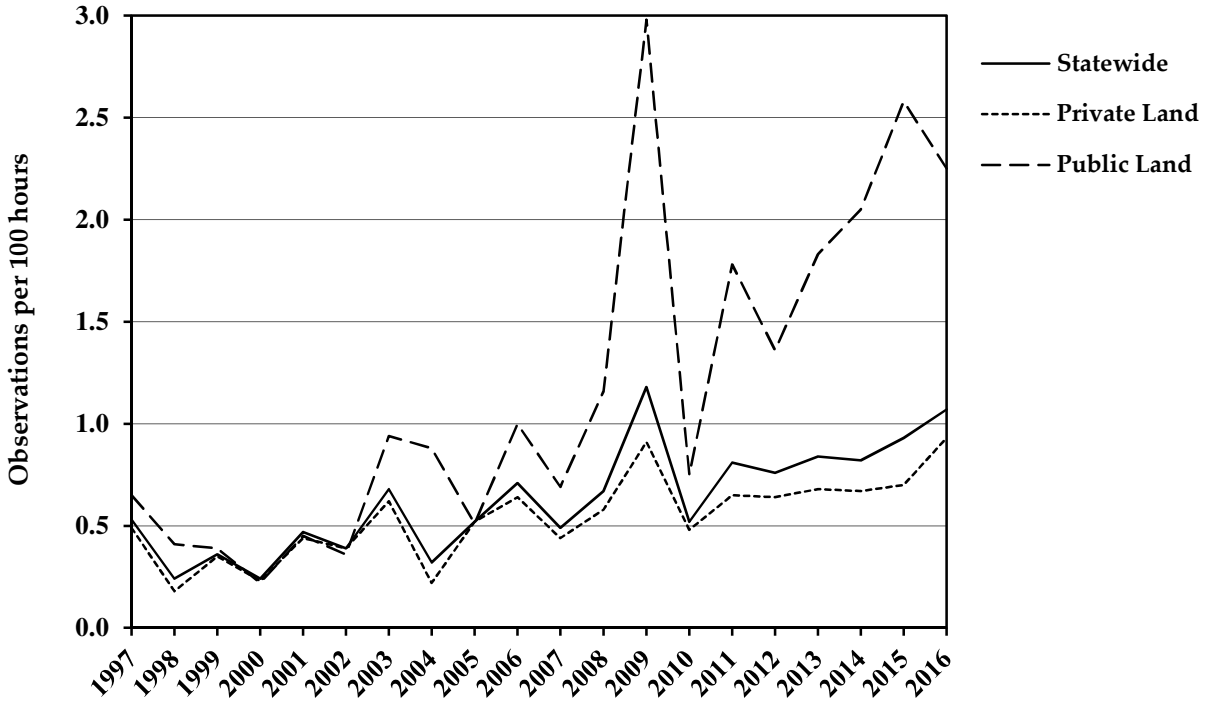


Figure 17. Black bears observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

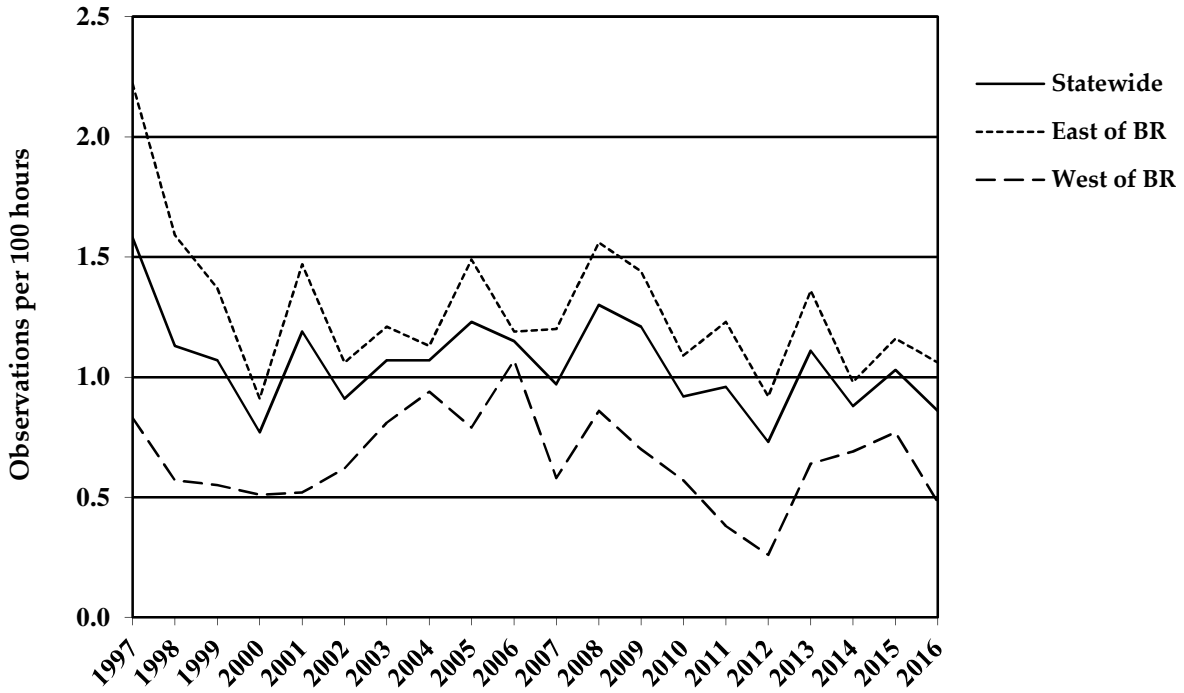


Figure 18. Red foxes observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

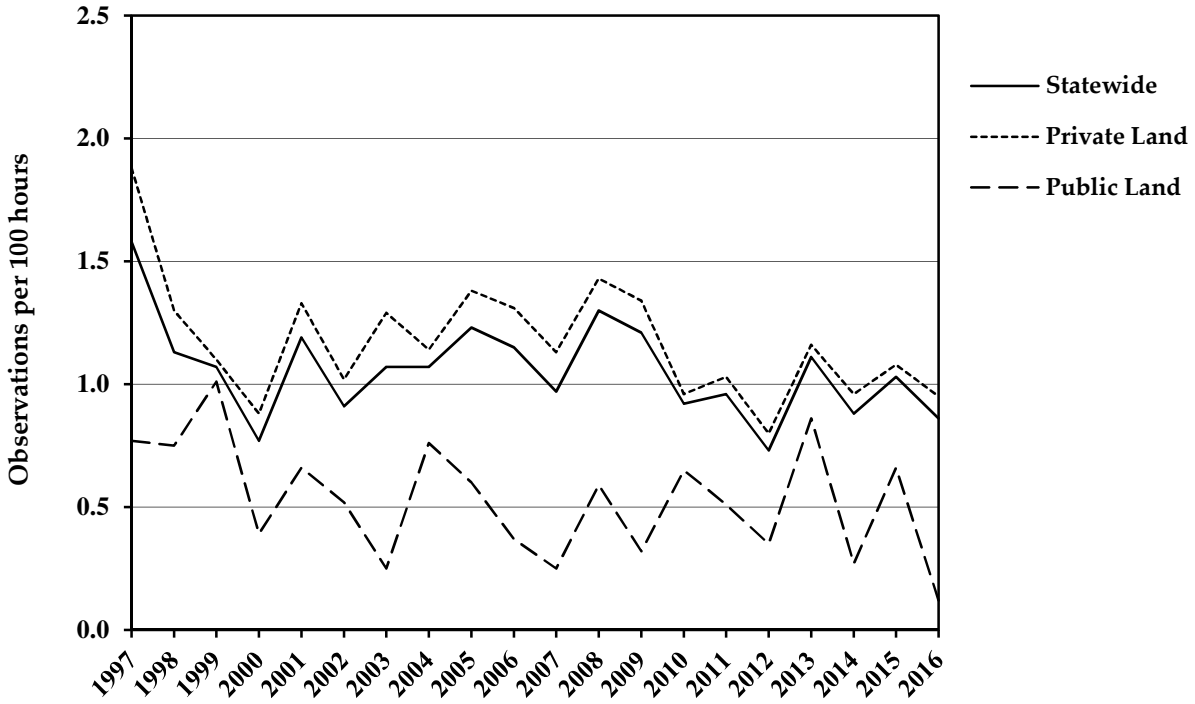


Figure 19. Red foxes observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

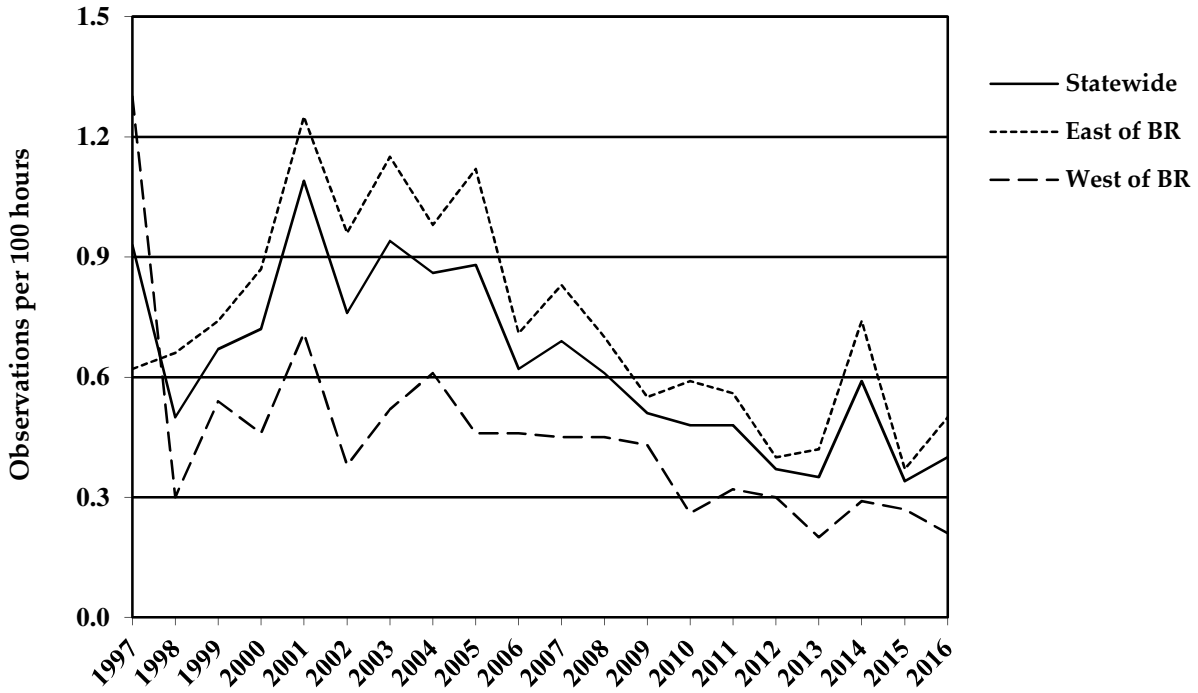


Figure 20. Gray foxes observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

Figure 21. Gray foxes observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

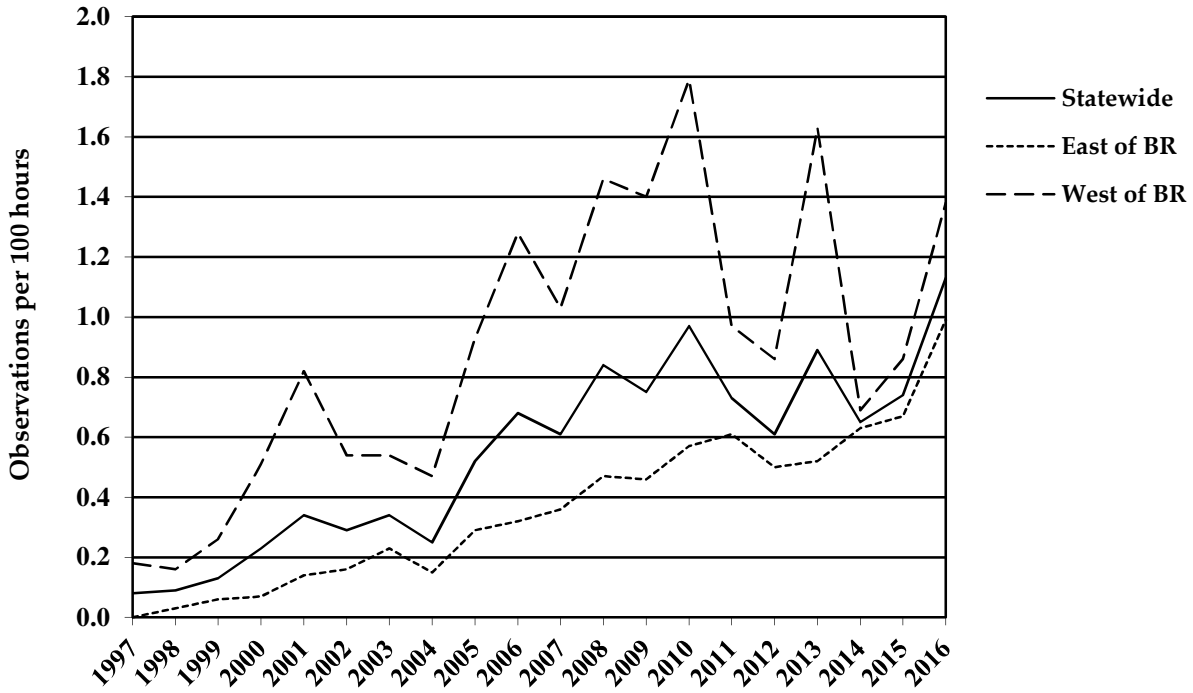


Figure 22. Coyotes observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

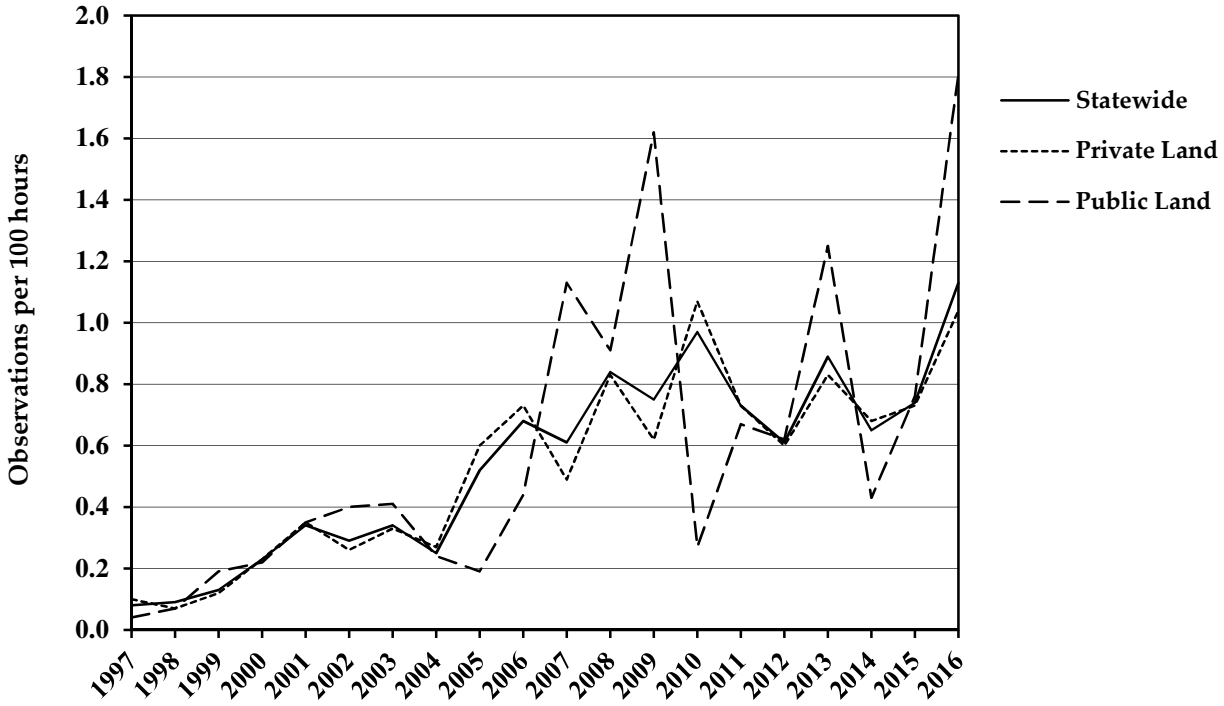


Figure 23. Coyotes observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

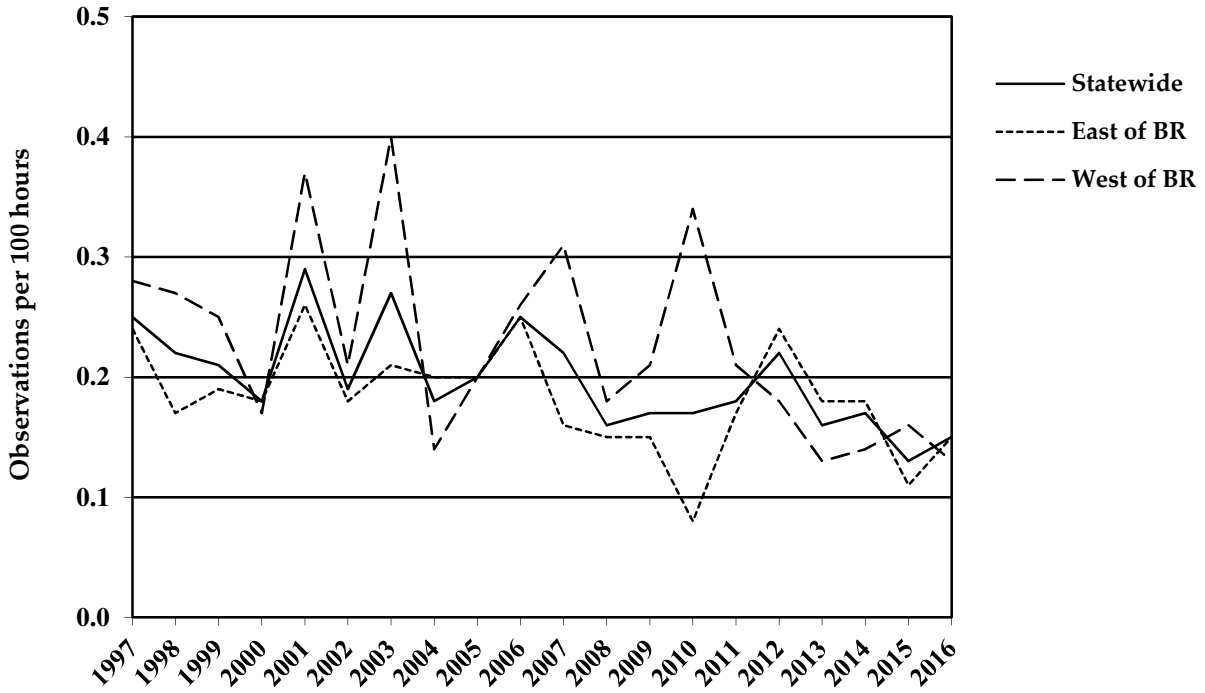


Figure 24. Bobcats observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

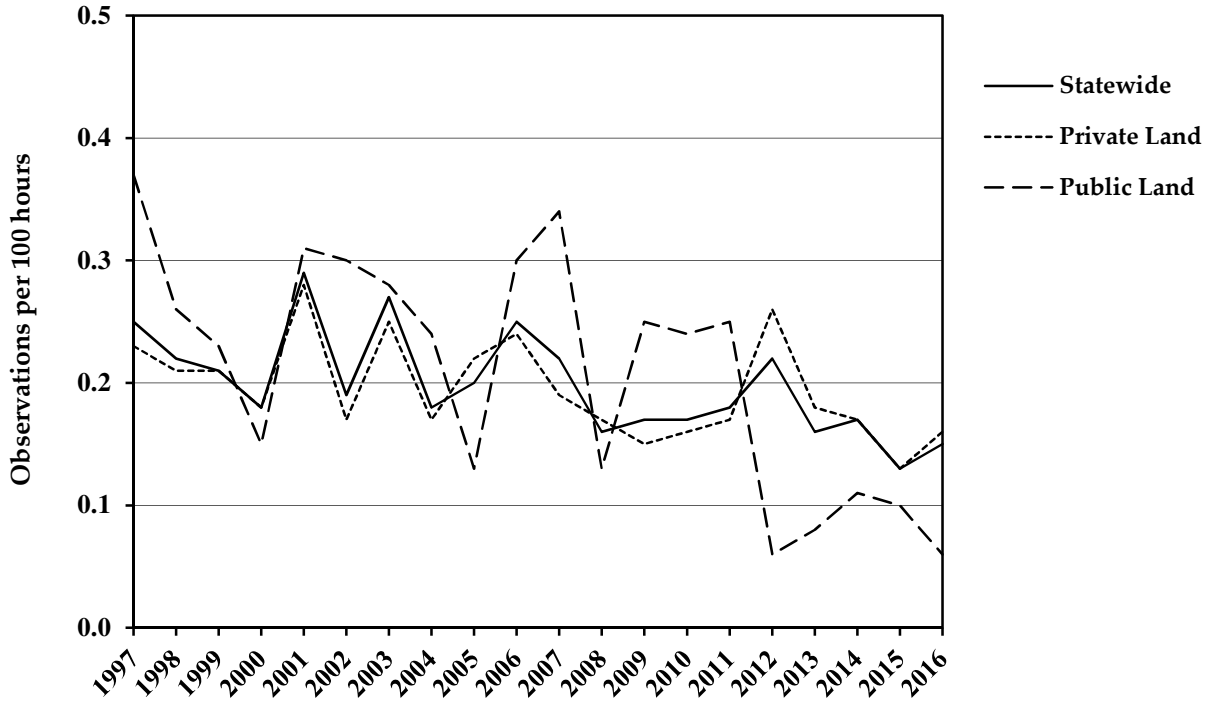


Figure 25. Bobcats observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

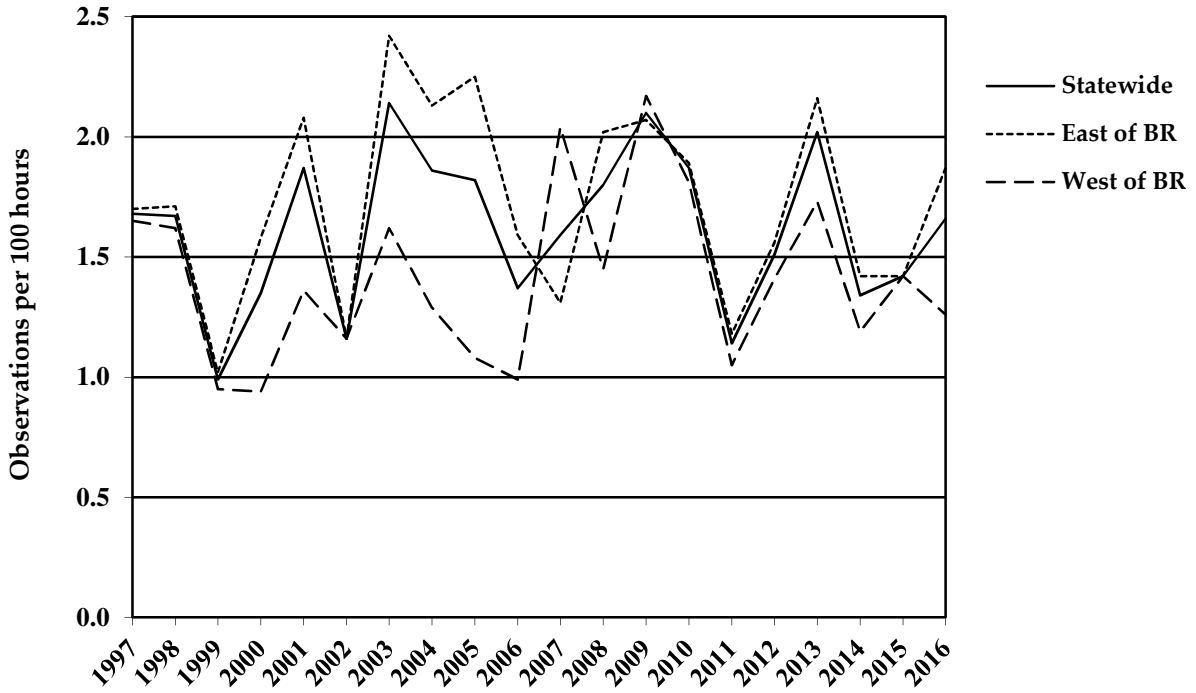


Figure 26. Raccoons observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

Figure 27. Raccoons observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

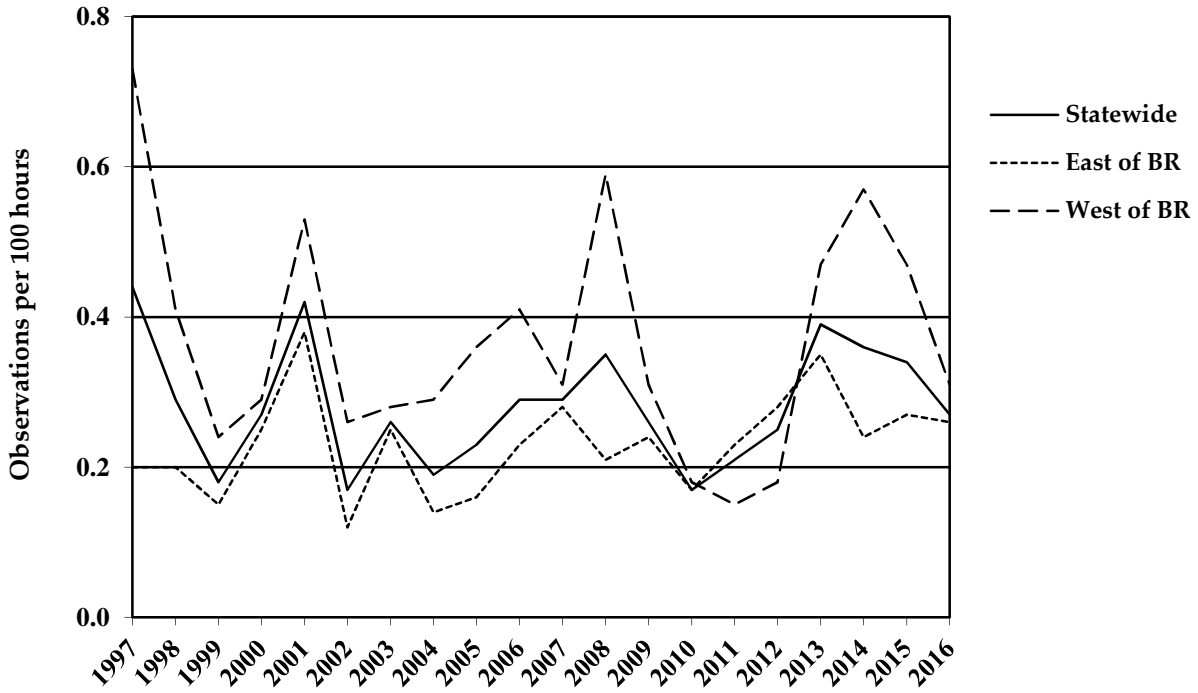


Figure 28. Opossums observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

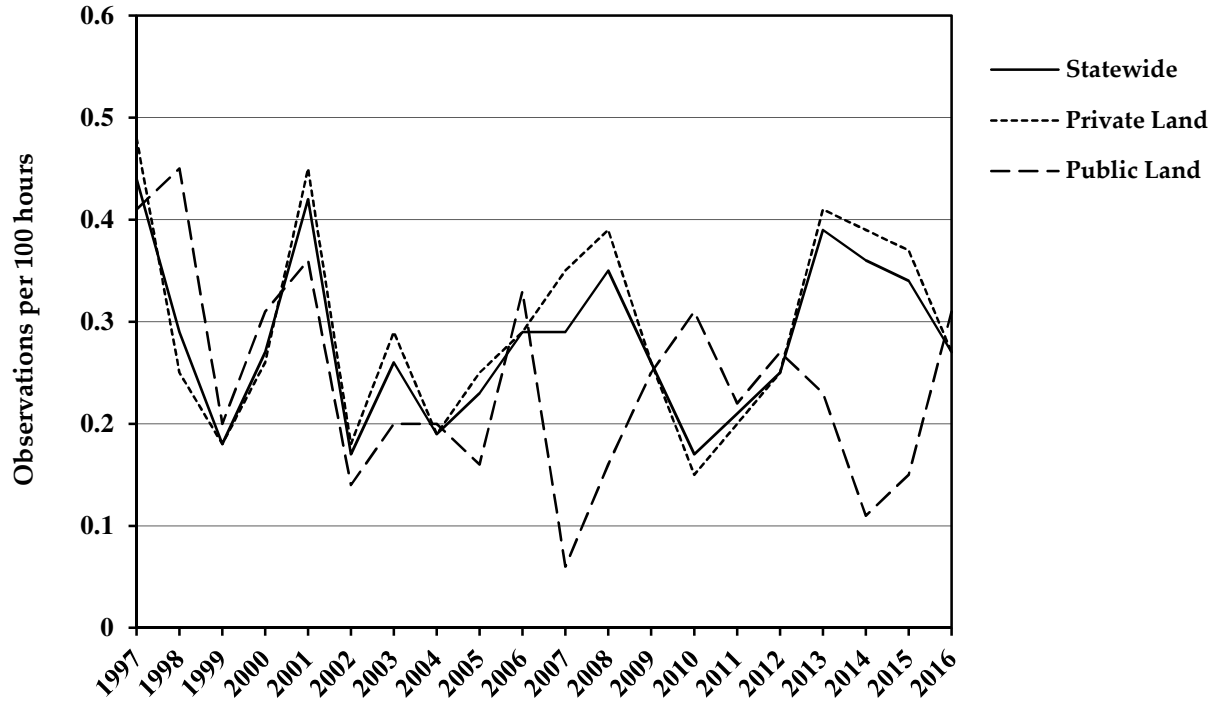


Figure 29. Opossums observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

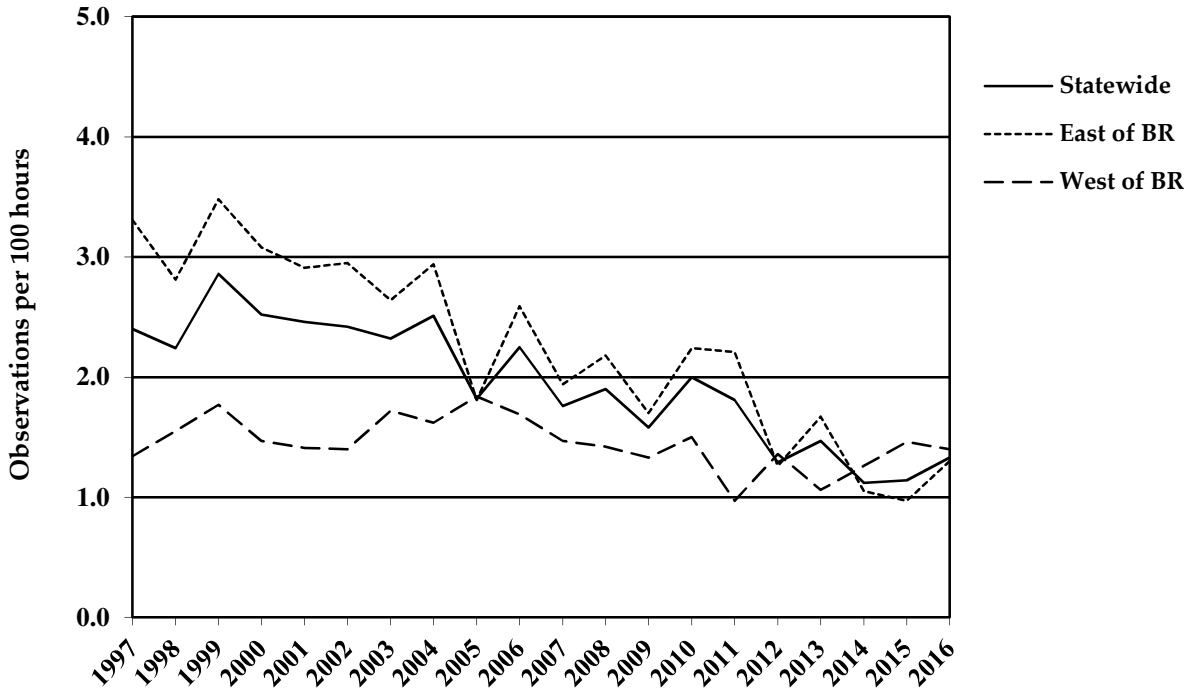


Figure 30. Dogs observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

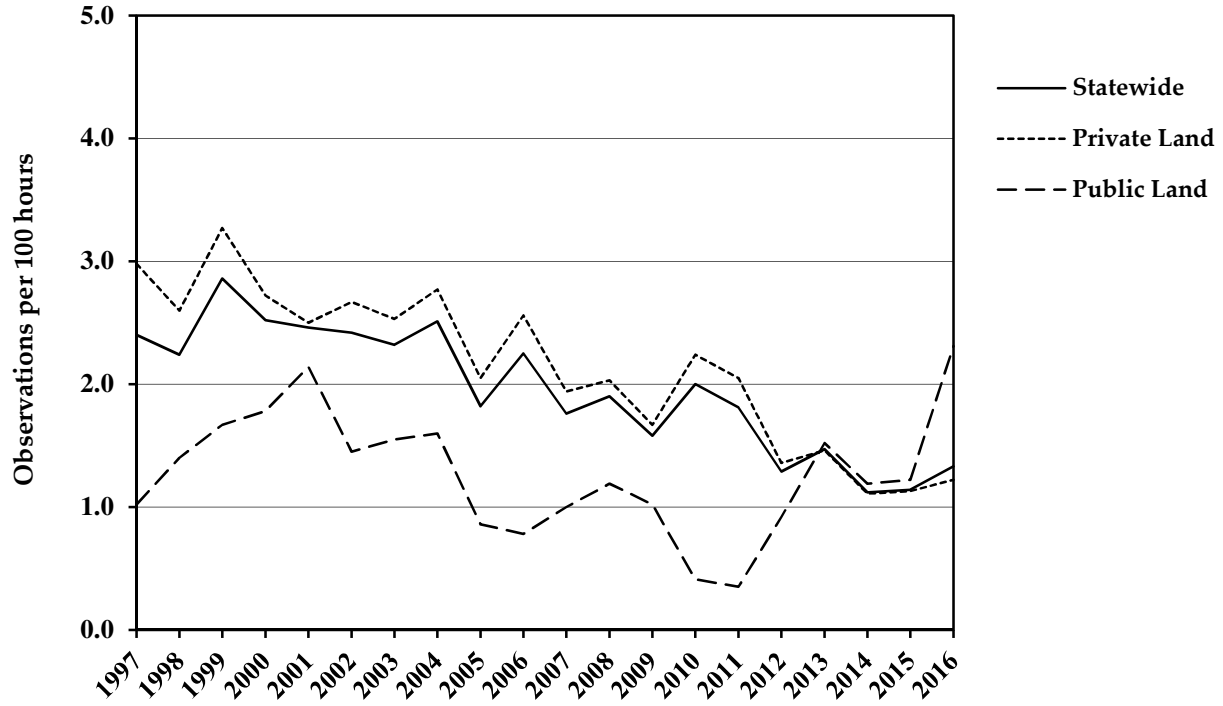


Figure 31. Dogs observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

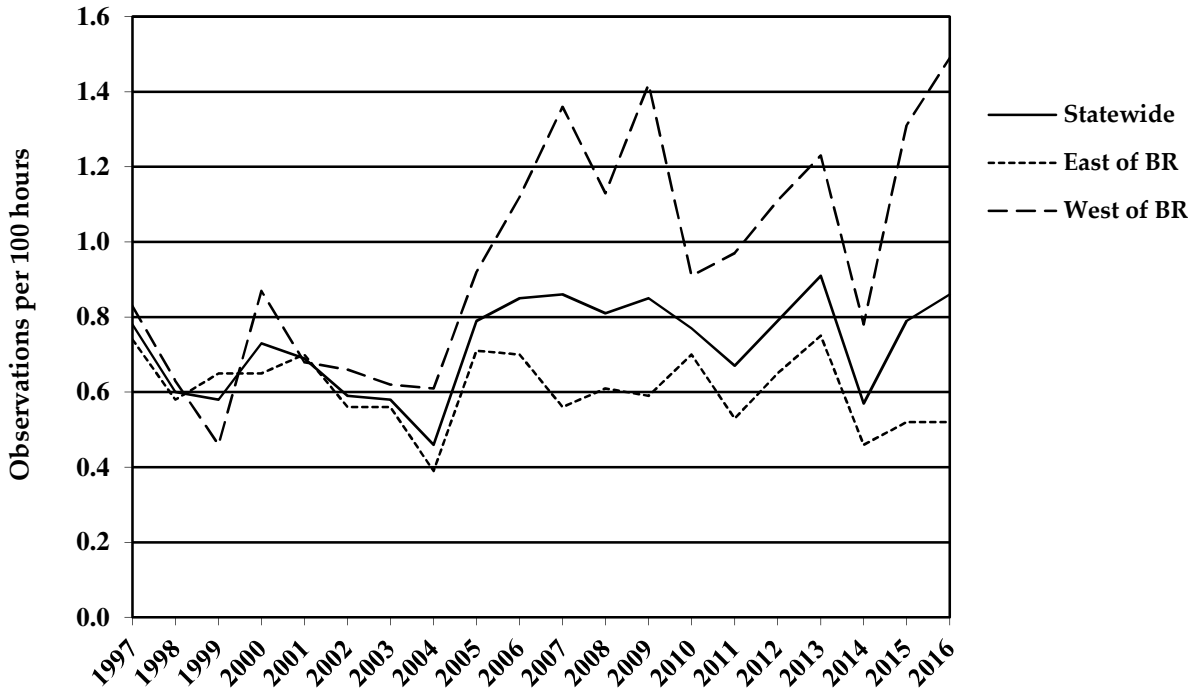


Figure 32. House cats observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

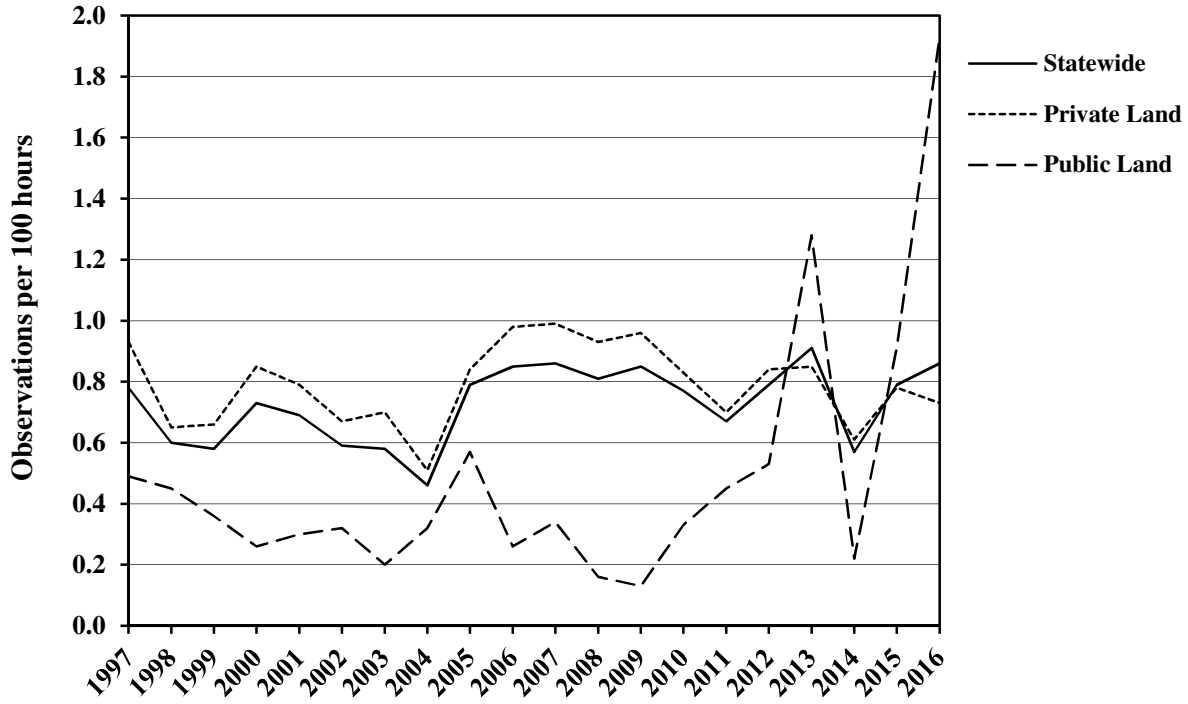


Figure 33. House cats observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

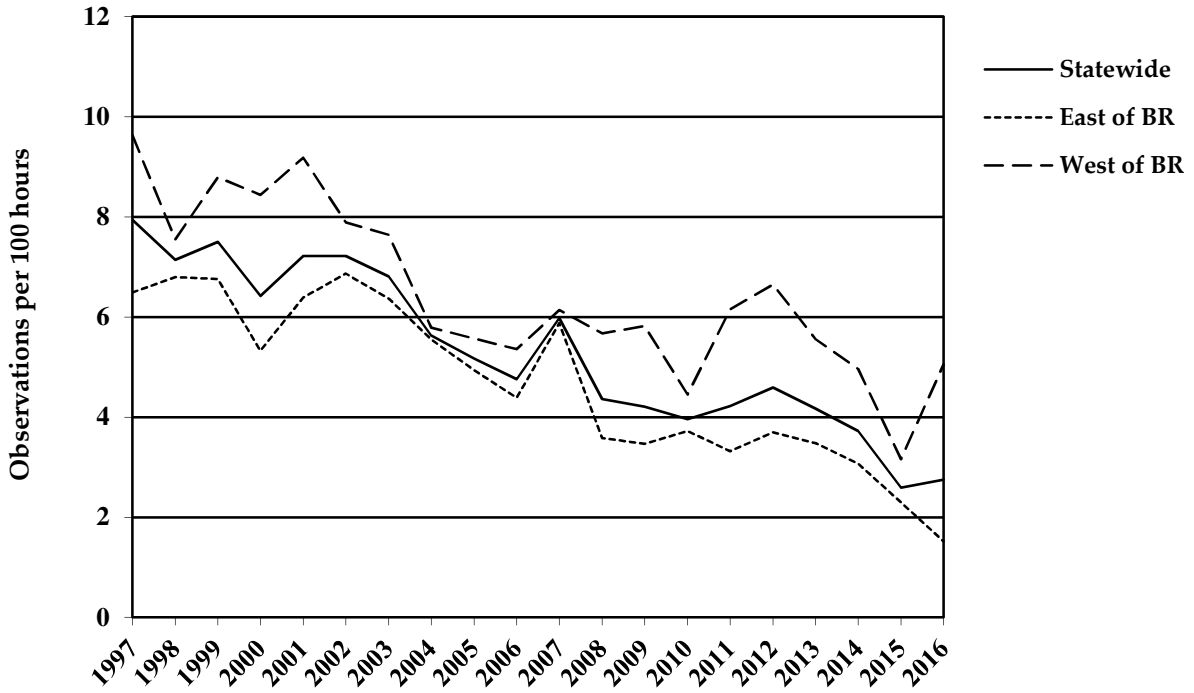


Figure 34. Hunters observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 east and west of the Blue Ridge Mountains and statewide in Virginia.

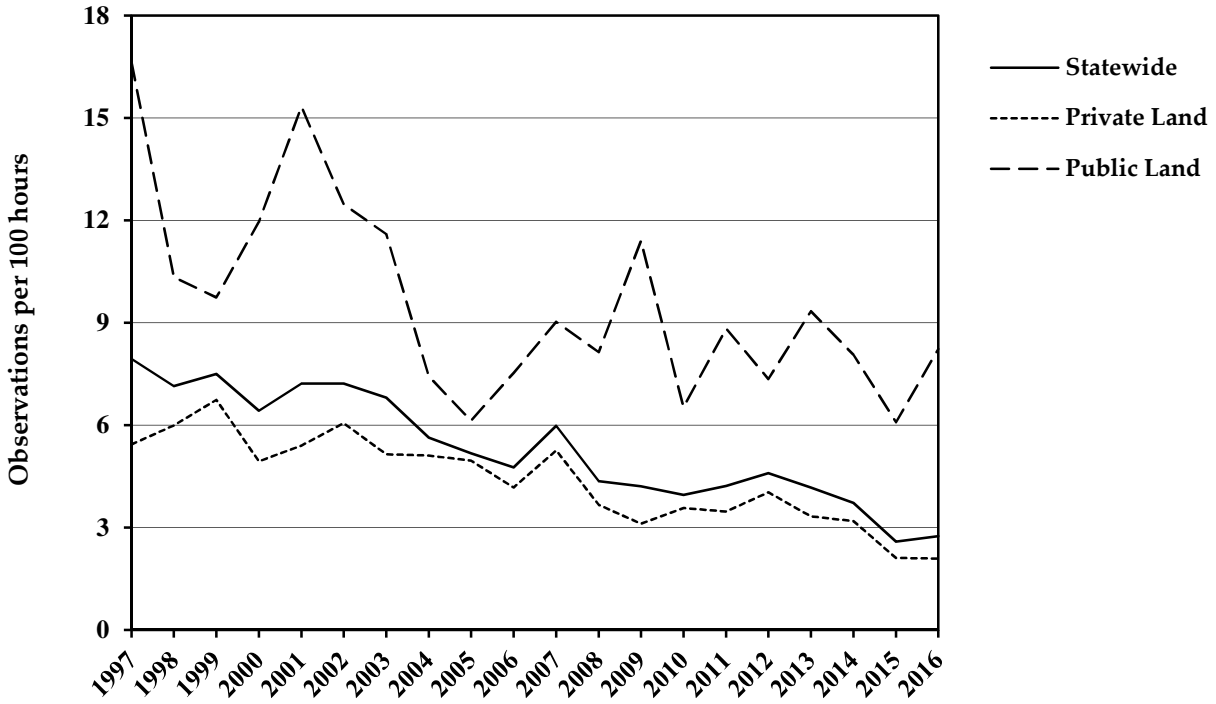


Figure 35. Hunters observed (per 100 hours of hunting) by cooperating early archery hunters from 1997-2016 by land ownership and statewide in Virginia.

## 2016 Bowhunter Observation Record

*Virginia Department of Game and Inland Fisheries*

Please see instructions on back of form.

Name: _____

Address: _____

City and Zip Code: _____

* Mast Crop and Weather Codes:

| | | | | |
|---|---|---|---|---|
| Mast Crop: | 1) none | 2) light | 3) moderate | 4) heavy |
| Precipitation: | 1) none | 2) drizzle | 3) moderate | 4) heavy |
| Wind: | 1) none | 2) light | 3) breezy | 4) strong |
| Temperature: | 1) <40° F | 2) 40-70° F | 3) >70° F | |

| Date | Number of Hours Hunted | County | Public Owned Land? (Yes or No) | Deer (antlered) | Deer (does) | Deer (fawns) | Deer (unknown) | Gray Squirrel | Fox Squirrel | Turkey (bearded) | Turkey (no beard) | Turkey (unknown) | Grouse | Bear (adult) | Bear (cub) | Red Fox | Gray Fox | Coyote | Bobcat | Raccoon | Opossum | Striped Skunk | Elk | Feral Hog | Dog | House Cat | Hunter | Other Animals & Number Seen | Mast* | Precipitation* | Wind* | Temperature* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Oct 3* | *4 ½* | *Example* | *Yes* | | 1 | 2 | | | | | | | | | | | | | 1 | | | | | | | | | *Eagle:1* | 3 | 2 | 1 | 2 |
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Appendix 1. Survey instrument for 2016 Virginia Bowhunter Survey.

## INSTRUCTIONS

1. If you wish to participate in next years survey, and do not wish to maintain your confidentiality, please fill in your name and address at the top of the form and in the return address box below.
2. Enter *number of hours* for each *date* you hunted **between Oct. 1 and Nov. 18** (early season) **only.** Do not separate morning and evening hunts on different lines (combine data from both hunts).
3. Write in the *county* where you hunted. If you hunted in more than one county on a single day, record different counties on different lines of the form.
4. Report whether or not you were hunting on *public owned land* (state or federal).
5. Enter the *number* of animals and other hunters you observed while hunting. Begin observations upon leaving your vehicle and end observations when you return to your vehicle.
6. If you saw a species *not listed* at the top of the chart, enter the *name* and *number* of animals in the "Other Animals" column near the right side of the form.
7. On the last four columns of the chart, record the *mast abundance* (acorn crop) and *average weather* conditions for the time period hunted. Use the *number codes* at the top right corner of the form.
8. *Fold* this form along the lines below so that our address shows, and *tape* it together.
9. Please *mail* this form to us by **January 1, 2017**. *No postage is needed.*

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 5 VERONA VA
POSTAGE WILL BE PAID BY ADDRESSEE

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BOWHUNTER SURVEY
VA DEPT OF GAME & INLAND FISHERIES
PO BOX 996
VERONA VA 24482-9901

Name: _____
Address: _____
City/Town: _____

**If you wish to continue to participate in the Virginia Bowhunter Survey, and do not wish to maintain confidentiality, please enter your name and address in the return address box. Thank you.**

**RETURN ADDRESS (OPTIONAL).**

**DO YOU KNOW OF OTHER HUNTERS WHO WOULD LIKE TO PARTICIPATE IN THE BOWHUNTER SURVEY? IF SO, PLEASE ENTER THEIR NAMES AND ADDRESSES BELOW:**

| | |
|---|---|
| Name: _____ | Name: _____ |
| Address: _____ | Address: _____ |
| City/Town: _____ | City/Town: _____ |

**THANK YOU FOR PARTICIPATING!!**

FOLD HERE

Appendix 2. Instructions for 2016 Virginia Bowhunter Survey Form.

Appendix 3. Virginia counties hunted, hunts per county, and percentage of total state hunts per county by cooperating archery hunters 1 October to 18 November 2016 in Virginia.

| County | No. Hunts | % of Hunts | County | No. Hunts | % of Hunts |
|---|---|---|---|---|---|
| Accomack | 10 | 0.28 | King William | 82 | 2.33 |
| Albemarle | 93 | 2.65 | Lancaster | 38 | 1.08 |
| Alleghany | 14 | 0.40 | Lee | 6 | 0.17 |
| Amelia | 11 | 0.31 | Loudoun | 13 | 0.37 |
| Amherst | 87 | 2.48 | Louisa | 32 | 0.91 |
| Appomattox | 20 | 0.57 | Lunenburg | 13 | 0.37 |
| Augusta | 89 | 2.53 | Madison | 67 | 1.91 |
| Bath | 18 | 051 | Mathews | 26 | 0.74 |
| Bedford | 140 | 3.98 | Mecklenburg | 2 | 0.06 |
| Bland | 19 | 0.54 | Middlesex | 0 | 0.00 |
| Botetourt | 23 | 0.65 | Montgomery | 44 | 1.25 |
| Brunswick | 36 | 1.02 | Nelson | 35 | 1.00 |
| Buchanan | 20 | 0.57 | New Kent | 17 | 0.48 |
| Buckingham | 7 | 0.20 | Northampton | 0 | 0.00 |
| Campbell | 3 | 0.09 | Northumberland | 19 | 0.54 |
| Caroline | 1 | 0.03 | Nottoway | 36 | 1.02 |
| Carroll | 42 | 1.19 | Orange | 27 | 0.77 |
| Charles City | 60 | 1.71 | Page | 5 | 0.14 |
| Charlotte | 15 | 0.43 | Patrick | 26 | 0.74 |
| Chesapeake | 0 | 0.00 | Pittsylvania | 89 | 2.53 |
| Chesterfield | 26 | 0.74 | Powhatan | 26 | 0.74 |
| Clarke | 18 | 0.51 | Prince Edward | 8 | 0.23 |
| Craig | 37 | 1.05 | Prince George | 67 | 1.91 |
| Culpeper | 87 | 2.48 | Prince William | 65 | 1.85 |
| Cumberland | 25 | 0.71 | Pulaski | 15 | 0.43 |
| Dickenson | 34 | 0.97 | Rappahannock | 50 | 1.42 |
| Dinwiddie | 12 | 0.34 | Richmond | 6 | 0.17 |
| Essex | 14 | 0.40 | Roanoke | 30 | 0.85 |
| Fairfax | 65 | 1.85 | Rockbridge | 59 | 1.68 |
| Fauquier | 134 | 3.81 | Rockingham | 96 | 2.73 |
| Floyd | 68 | 1.93 | Russell | 17 | 0.48 |
| Fluvanna | 48 | 1.37 | Scott | 5 | 0.14 |
| Franklin | 58 | 1.65 | Shenandoah | 149 | 4.24 |
| Frederick | 38 | 1.08 | Smyth | 21 | 0.60 |
| Giles | 28 | 0.80 | Southampton | 157 | 4.47 |
| Gloucester | 46 | 1.31 | Spotsylvania | 42 | 1.19 |
| Goochland | 14 | 0.40 | Stafford | 17 | 0.48 |
| Grayson | 12 | 0.34 | Suffolk | 25 | 0.71 |
| Greene | 3 | 0.09 | Surry | 38 | 1.08 |
| Greensville | 30 | 0.85 | Sussex | 32 | 0.91 |
| Halifax | 9 | 0.26 | Tazewell | 33 | 0.94 |
| Hanover | 47 | 1.34 | Virginia Beach | 12 | 0.34 |
| Henrico | 36 | 1.02 | Warren | 19 | 0.54 |
| Henry | 19 | 0.54 | N. News / Hampton | 5 | 0.14 |
| Highland | 35 | 1.00 | Washington | 94 | 2.67 |
| Isle of Wight | 14 | 0.40 | Westmoreland | 72 | 2.05 |
| James City | 20 | 0.57 | Wise | 0 | 0.00 |
| King & Queen | 4 | 0.11 | Wythe | 40 | 1.14 |
| King George | 46 | 1.31 | York | 3 | 0.09 |