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Harvest Rates and Efforts of Avid Quail Hunters in East Central Mississippi

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Abstract: Six avid quail hunters had an average daily harvest rate of 6.39 (4.97-8.55) and average seasonal harvest of 298 (116-530); they averaged 47 (28-60) hunts or days afield per year for a period of 2-10 years. The avid hunters averaged three to four hunts per week, and the hunts lasted three to four hours. Two hunters often had hunting guests, and the total seasonal harvest by guests averaged 117 (63-211) with one hunter and 121 (56-178) with the other hunter. A seventh avid quail hunter usually had quests, with an average hunting party of 2.45; they harvested an average of 449 (388-510) quail per year over a two year period. Quail harvested per hour of effort ranged from 0.95 to 2.2. Harvest rates and efforts of avid quail hunters were much greater than those of average quail hunters depicted in hunter mail questionnaire surveys.

Wildlife management includes gathering information on hunter harvest rates and effort, and this information has important biological, educational, and administrative values (Guynn et al. 1977). Several state wildlife agencies in the Southeast use a mail survey to obtain information on hunter harvest rates and effort, including data on bobwhite quail (Colinus virginianus) hunters (Steffen 1981). Published information on quail harvest rates and efforts represents “average” quail hunters. This study was undertaken to document the harvest rates and efforts of avid quail hunters (bird hunters) in east central Mississippi.

We acknowledge the information contributed by the avid quail hunters. We also extend our gratitude to Mississippi Department of Wildlife Conservation personnel who assisted.

RESULTS

The average daily harvest for six of the hunters was 6.39 (4.97-8.55) for a period of 2-10 years (Table 1). Seasonal harvest averaged 298 (116-530), and these hunters averaged 47 (28-60) hunts or days afield. During the season when the highest seasonal total for an individual (530) was attained, this hunter averaged 10.7 quail per hunt. Avid quail hunters made three to four hunts per week, and the average hunt lasted three to four hours.

Hunters number 1, 2, 4, and 6 usually hunted alone, but hunters 3 and 5 usually had hunting guests. Total quail harvest by all guests combined averaged 117 (63-211) with hunter number 5 and 121 (56-178) with hunter number 3. A seventh avid quail hunter usually had guests, and during the 1979-1980 season, this hunter and guests (average 2.55 people) harvested 510 quail on 34 hunts (15 quail per hunt). Total effort was 86.7 hours with a harvest rate of 5.9 quail per man-day afield. In the 1980-1981 season, this same hunter and guests (average 2.35 people per hunt) made 26 hunts, spent 61.1 hours afield,

METHODS

Hunting records were obtained from seven avid quail hunters, six who have hunted quail for over 10 years and one who has hunted quail for five years. All hunters trained their bird dogs and used from two to five dogs. Hunters recorded information regarding a hunt immediately after each hunt. A hunt (effort) was considered as any part of or all of a day afield. Several hunters recorded the time (hours) spent on each hunt.

Most quail hunting was conducted around edges of soybean fields and in surrounding old fields and forests in Holmes, Attala, Webster, Clay, Oktibbeha, and Lowndes counties, Mississippi. The quail hunting season in Mississippi extends from Thanksgiving Day through the last day in February (about 94 days), and the daily bag limit is 12.
and harvested 388 quail, which was 14.9 quail per
hunt or 6.35 quail per man-day afield.

One hunter harvested 0.95 quail per hour of
effort, which was about the same harvest rate (1
quail/hour) estimated by another hunter. A third
hunter averaged 2.2 quail per hour of effort in a
season when 432 quail were harvested. This
hunter obtained the daily limit (12) of quail on
14 hunts during the season.

DISCUSSION

Many factors affect harvest rates of quail,
including hunter effort, experience, and shooting
skills; dog training and experience; number and
behavior of quail; and hunting conditions
(vegetation and weather). In this study, sample
size was small and the information came from only
one region of Mississippi. However, we believe
the information from seven avid quail hunters,
who by our definition hunt quail 28+ days and
harvest 100+ quail per season, represents avid
quail hunters throughout Mississippi and probably
other southern states where the bobwhite quail is
common.

Harvest rates and efforts of avid quail
hunters varied, but were greater than the
"average" quail hunter depicted in mail surveys.
Mail surveys in Mississippi in 1973, 1977, and
1981 revealed that the average quail hunter
bagged 24.7 quail per season and 3.18 quail per
hunt (day afield) and hunted an average of 7.72
days per year (Quisenberry 1974, Guynn et al.
1977, Steffen 1981). Data obtained from mail
surveys in Alabama for 1979-1980 and
1980-1981 seasons were similar: 22.7 quail
harvested per season, 2.86 quail bagged per day,
and 7.91 hunting days per season (Kelly 1980,
1981). Five years' (1967-1978) data from mail
surveys in Louisiana found that quail hunters
averaged 16.6 quail per season and 2.36 per hunt
(effort) and hunted 6.96 days per season (Hunter
1981). In Louisiana from 1975-1979, Prickett
(1981) selected and surveyed quail hunters
associated with quail clubs or field trial
groups. These hunters had an average seasonal
harvest of 13.1 and a daily average of 3.1 and
hunted an average of 4.4 days per season.

Avid quail hunters in Mississippi harvested
about one to two quail per hour of effort.
Exceptionally high harvest rates of 2.6 and 2.7
quail per hour were recorded by hunters in
Mississippi and Alabama on young loblolly pine
(Pinus taeda) plantations (Hurst 1978). Perkins
(1952) found that the average quail hunt in
cut-over longleaf pine (P. palustris) forests of
southwest Louisiana lasted 4.42 hours, and an
average of 4.74 quail was harvested per hunt
(1.07/hour). A harvest rate of 3.6 quail per
hunter per hour was recorded on one intensively
managed quail plantation and 2.2 on another in
central Georgia (letter dated 9 May 1978 from R.
C. Simpson, Georgia Department Natural Resources,
Albany, GA).

Information gathered from mail surveys
represents harvest rates and efforts of "average"
quail hunters. The results are misleading due to
the great variation and effects of averaging data
on effort and harvest. If the questionnaire data
were plotted by effort, the differences in effort
and harvest would become apparent given a large
enough sample size. Mail surveys should attempt
to classify quail hunters by effort and harvest.
Combining avid quail hunters, who average 100-500
quail per season, with hunters who harvest quail
while hunting other species distorts the results.

Table 1. Harvest rates and efforts of avid quail hunters in east central
Mississippi.

<table>
<thead>
<tr>
<th>Hunter</th>
<th>Yrs. Data</th>
<th>Harvest</th>
<th>Efforta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Collected</td>
<td>Daily</td>
<td>Seasonal</td>
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<tr>
<td>1</td>
<td>2 (1979-81)</td>
<td>7.76</td>
<td>288</td>
</tr>
<tr>
<td>2</td>
<td>2 (1979-81)</td>
<td>4.83</td>
<td>191</td>
</tr>
<tr>
<td>3</td>
<td>3 (1978-81)</td>
<td>8.55</td>
<td>424</td>
</tr>
<tr>
<td>4</td>
<td>4 (1977-81)</td>
<td>5.33</td>
<td>238</td>
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<tr>
<td>5</td>
<td>10 (1971-81)</td>
<td>6.88</td>
<td>220</td>
</tr>
<tr>
<td>6b</td>
<td>10 (1966-76)</td>
<td>6.12d</td>
<td>449</td>
</tr>
<tr>
<td>7c</td>
<td>2 (1979-81)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

aDays hunted (afield), recorded as any part of or all of a day.
bThis hunter scheduled his efforts through mid-January, then did not hunt
much thereafter.
cData for a hunting party, average 2.45 hunters per hunt over 2 seasons.
dHarvest per man-day afield
It was apparent that mail surveys do not represent avid quail hunters.

The number of avid quail hunters in Mississippi or any other southern state is not known, but we think the number is greater than most wildlife agencies suspect. Agencies could identify avid quail hunters from survey information and interviews with little effort. We believe that avid quail hunters represent a source of valuable information on quail populations (sex and age ratios, population trends), food habits, habitat changes, and other data.

LITERATURE CITED


