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ATTITUDES OF A SELECT GROUP OF ILLINOIS QUAIL HUNTERS

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Abstract: During the past 3-4 decades major social, political, economic, and environmental changes have taken place in the United States that have greatly affected quail hunters, their quarry, and their sport. Against this backdrop, we examined the attitudes and perceptions of a select group of Illinois quail hunters from 1954 to 1989 regarding issues such as stocking, predator control, habitat management, and harvest regulations. During this time, hunters became increasingly cognizant of the importance of habitat and less inclined to demand unproductive practices such as stocking. Concerns about predators peaked in the 1970's. Hunters in the 1980's tended to want more liberal hunting seasons than did their predecessors. Possible explanations and implications of these trends are discussed.

Key words: attitudes, hunters, northern bobwhite.

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Profound social, political, economic, and environmental changes have taken place in the U.S. over the past 3-4 decades. Many of these changes have directly or indirectly affected wildlife and their habitats. Populations of upland game including northern bobwhite (*Colinus virginianus*) have dwindled in the face of intensified agriculture and expanding human developments (Burger 1978, Klimstra 1982). Additionally, there have been significant changes in public attitudes toward the environment in general and wildlife resources in particular (Decker and Goff 1987, Wagner 1989). Against this backdrop, we examined attitudes and perceptions of selected Illinois quail hunters from 1954 to 1989 regarding their sport and quarry.

We extend our sincere appreciation to the many quail hunters whose cooperation over the years made this study possible. We also thank K. Wood for assistance in compiling the data. L. David, J. Ellis, and A. Woolf reviewed the manuscript and provided helpful suggestions. The project was alternately funded by the Illinois Natural History Survey; the Cooperative Wildlife Research Laboratory, Southern Illinois University-Carbondale; and the Illinois Department of Conservation through Federal Aid in Wildlife Restoration Projects W-49-R and W-99-R.

¹ Dr. Klimstra died February 25, 1993.

METHODS

We conducted informal opinion surveys of Illinois quail hunters annually from 1954 to 1989 in conjunction with other long-term research. Following each hunting season, participants received a postcard questionnaire requesting information on hunting success and inviting general comments regarding bobwhite management. Responses were classified into 1 or more of the following categories: bobwhite behavior, weather, predation, stocking, habitat, and harvest regulations. The survey population consisted of a semipermanent roster of 200-300 quail hunters from the southern 34 counties of Illinois with new participants recruited each year as necessary. During the last year of study, the survey also included quail hunters from 16 counties in westcentral Illinois. We received 3,628 responses during the 36-year period of which 1,555 (42.9%) contained comments relevant to this study. Inferential statistics were not used because many of the same individuals were surveyed over a number of years; therefore annual samples were neither random nor independent. For purposes of analysis and presentation, responses were separated by decade (1950's, 1960's, 1970's, and 1980's) and by bobwhite population trend (increasing/high years vs. declining/low years). Relative status of annual bobwhite populations (increasing, declining, high, low) was based on kill/effort data and on hunter opinion as to whether there were more, fewer, or similar num-

bers of bobwhite in their area compared to the previous year.

RESULTS

Temporal Trends in Bobwhite Abundance and Numbers of Hunters

Changing land-use patterns during the past 30-35 years have substantially reduced bobwhite habitat, populations, and hunting opportunities over much of the species' range (Brennan 1991). In Illinois, estimated annual hunter harvests declined from >2.5 million birds in the late 1950's (Preno and Labisky 1971) to <1 million in the late 1980's (Anderson et al. 1990). Superimposed on this general downward trend was a series of more dramatic, but temporary, fluctuations related primarily to weather (Fig. 1).

The decade of the 1950's began with a series of droughts that depressed bobwhite numbers throughout the Midwest (Stanford 1953). However, farming practices and agricultural policies in many parts of the country were still conducive to producing good bobwhite populations as a byproduct. Consequently, by the end of the decade bobwhite had attained densities that will likely never be reached again.

The 1960's started with a month-long period of late winter snow and cold that severely depressed bobwhite numbers throughout the Midwest (Stanford 1972). Populations rebounded somewhat by the mid-60's, but in retrospect, a general long-term decline was already evident as agricul-

tural practices became increasingly more unfavorable for upland wildlife.

The fortunes of bobwhite and quail hunters in the 1970's were primarily affected by 2 major phenomena. One was a pronounced shift toward more intensive, monocultural farming practices resulting in large-scale destruction of upland habitat and a marked reduction in bobwhite abundance throughout much of the country (Klimstra 1982). The second important event was a series of 3 historically severe winters that depressed midwestern bobwhite populations to all-time lows (Bucks 1982, Henry and Shipley 1989).

The outlook for bobwhite and quail hunters took somewhat of an upturn in the 1980's. Relatively benign weather permitted a slow recovery of populations in those portions of their range where adequate habitat still remained. Encouraging too was a shift in agricultural policy toward reduced tillage and other conservation farming practices (Minser and Dimmick 1988), and implementation of the 1985 Farm Bill including the potentially beneficial Conservation Reserve Program (Isaacs and Howell 1988).

The number of humans inhabiting Illinois also changed significantly during our study, along with their lifestyles and attitudes. The state's population increased approximately 20% from the mid-1950's to 1990, while resident hunting license sales declined about 40% and the estimated number of quail hunters declined >50%.

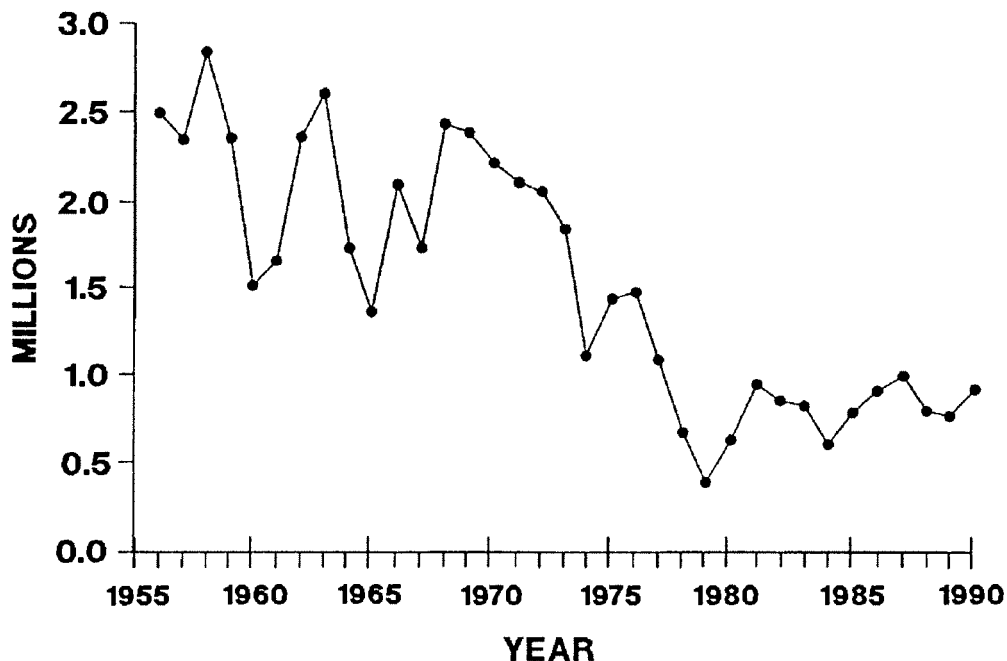


Fig. 1. Estimated annual bobwhite harvest in Illinois, 1956-90.

When our survey began, 1 out of every 18 Illinois residents hunted and 1 in 55 hunted bobwhite; when the survey ended, 1 in 36 Illinois residents hunted and 1 in 134 hunted bobwhite (Preno and Labisky 1971, Anderson et al. 1990).

Hunter Attitudes

Bobwhite Behavior.—Nearly 1/3 of the usable hunter responses mentioned bobwhite behavior. The general perception was that birds were unusually wild or becoming wilder (e.g., flushing ahead of hunters or dogs, running, etc.). References to wildness were somewhat more common in the 1950's and 60's (38.0%) than in the 1970's and 80's (28.4%). Certain cyclic Tetraonids are thought to be wildest during and preceding population lows (Grange 1949:141-142, Keith 1963:96, Bergerud 1972); in contrast, bobwhite may be most wild just prior to peak population phases (Roseberry and Klimstra 1984:49). In the present study, unusual prey wildness was mentioned relatively more often during increasing or high population phases (37.8%) than during declines or lows (27.4%). We compared reported incidence of wildness to population age structure to test the hypothesis that a high proportion of adults in the fall population was a contributing factor. However, there was no correlation between the yearly juvenile:adult ratio and corresponding

percentage of hunters reporting unusual wildness ($r = -0.17$; $P = 0.31$).

Weather.—Hunters often cited weather during the season as affecting dog work, hunting success, etc; however, only comments relating weather to bobwhite abundance are considered here. Of 171 such references, 45% were associated with just 3 periods: the severe late winter of 1960, the successive severe winters of the late 1970's, and the 1988 drought. As noted above, the first 2 weather events caused substantial bobwhite population declines in Illinois, whereas negative effects of the 1988 drought were less severe than originally anticipated (Roseberry 1989).

Predators/predation.—A relatively small proportion (7.8%) of hunter responses referenced predators or predation, and only 1 in 5 of these explicitly called for some type of control. We suspect that these figures would have been higher had the survey contained a specific question regarding predator management. Proportionately more hunters voiced concerns about predation during years of declining or low populations (8.1%) than during upswings or highs (5.2%). Comments about predators were relatively constant (4.5-7.3%) in the 1950's, 60's, and 80's, but peaked in the 1970's at 18.8% (Fig. 2). Two factors may have contributed to this trend. First, the greatest decline in bobwhite abundance occurred

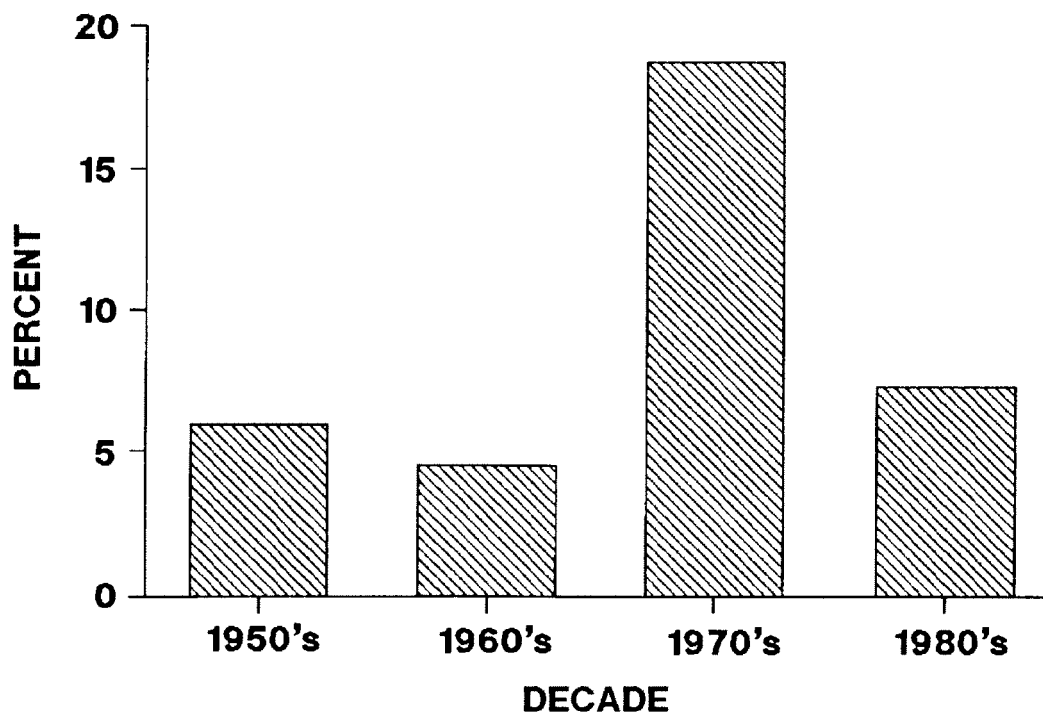


Fig. 2. Percentage of respondents referencing predators or predation by decade, Illinois quail hunter survey, 1954-89.

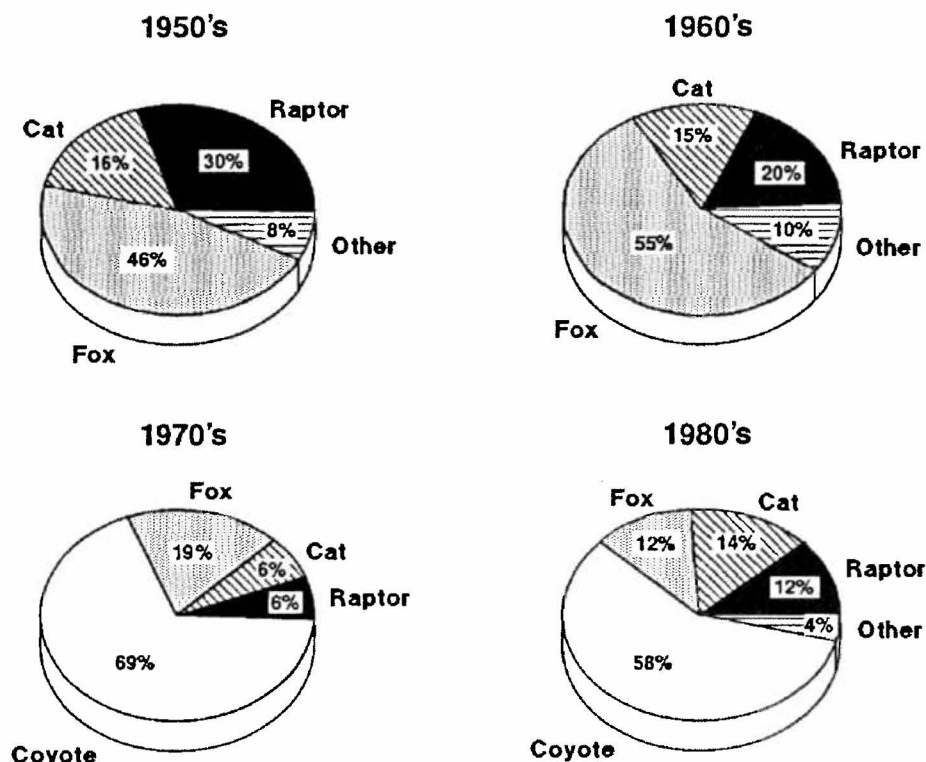


Fig. 3. Types of predators mentioned by decade, Illinois quail hunter survey, 1954-89.

during the 1970's (Fig. 1). In addition, there was a dramatic increase in the distribution and abundance of coyotes in Illinois and throughout the Midwest during this decade (Hoffmeister 1989:271). This phenomenon also was reflected in the specific types or groups of predators mentioned by quail hunters during the study. References to raptors and foxes were much more common in the 1950's and 60's than in the latter 2 decades; in contrast, coyotes were not mentioned in the 1950's and 60's (there were a few references to "wolves"), but were commonly cited in the 1970's and 80's (Fig. 3). Coyotes also were frequently blamed for the perceived increased wildness in bobwhite.

Stocking.—The proportion of hunters specifically recommending or calling for stocking as a management option declined steadily from a high of 15.8% in the 1950's to only 3.6% in the 1980's (Fig. 4). As with comments about predation, we suspect that these figures would have been higher had the survey contained a specific question on stocking.

Habitat.—This broad response category included any that evinced an awareness of the im-

portance of habitat (e.g., mention of habitat loss or gain, need for habitat improvement, etc.). Of the 1,555 responses we examined, 344 (22.1%) so qualified. Relatively few hunters (7.4%) mentioned habitat in the 1950's. This figure rose to 17.3% in the 1960's, then jumped to 24.5% in the 70's, and 26.6% in the 80's (Fig. 4).

Harvest Regulations.—Twenty percent (311) of respondents mentioned season length, opening and closing dates, or bag limits. The incidence of such references was lowest in the 1950's (15.3%) and highest in the 1980's (23.9%). When possible, comments were classified into 2 groups: those recommending more liberal harvest regulations and those recommending more restrictive or conservative regulations. As might be expected, the conservative:liberal ratio was higher during years of declining or low populations (78:32) than during years of increasing or high populations (54:46). During the 1950's, 60's, and 70's, hunters wanting more restrictive harvest outnumbered those wanting more liberal harvest by a 2:1 margin. During the 1980's, however, the ratio was approximately 1:1 (Fig. 5). Throughout the study, most hunters who expressed an opinion felt the

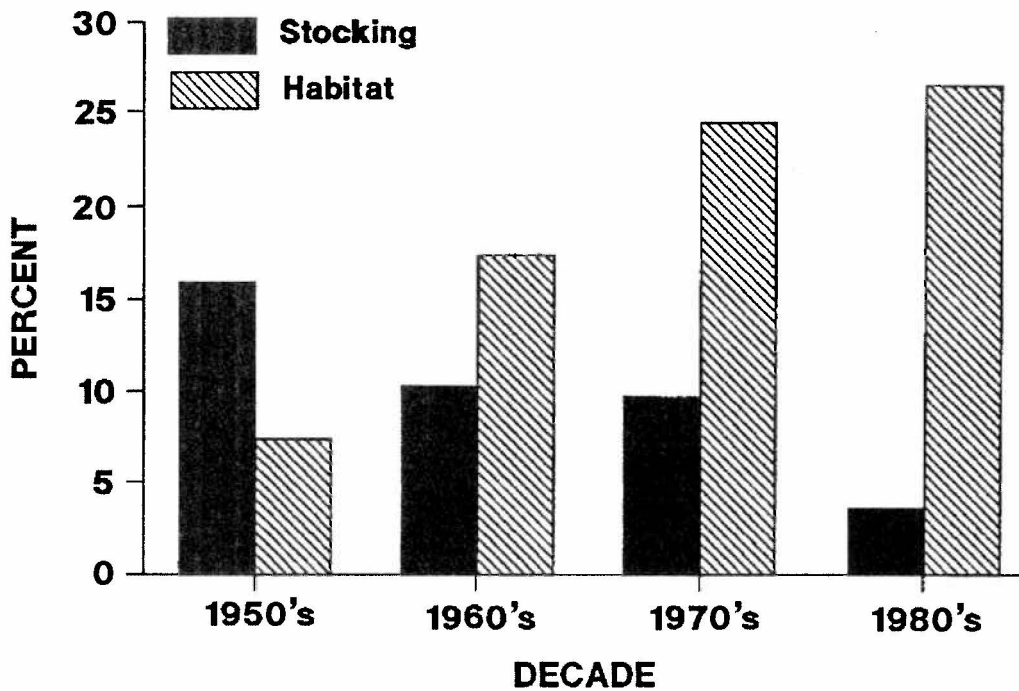


Fig. 4. Percentage of respondents mentioning stocking and/or habitat by decade, Illinois quail hunter survey, 1954-89.

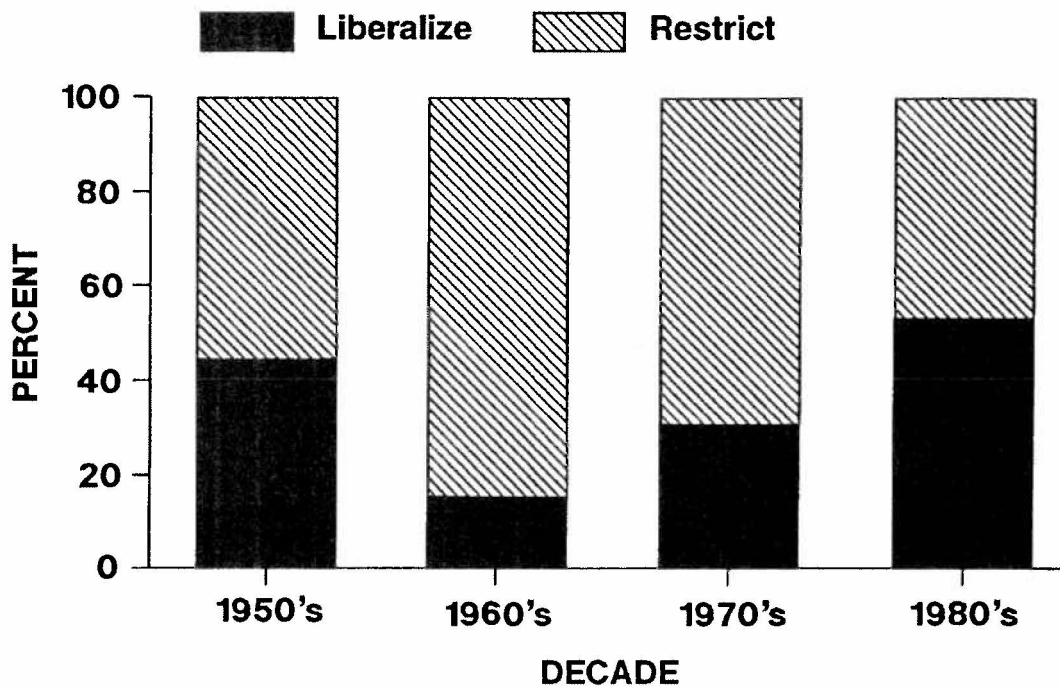


Fig. 5. Percentage of respondents favoring more liberal vs. more conservative harvest regulations by decade, Illinois quail hunter survey, 1954-89.

season started too early. During the first 3 decades, the ratio of hunters wanting a later start as opposed to an earlier one was about 8:2. In the 1980's, 100% of the hunters expressing an opinion felt opening dates were too early. In apparent contrast, only 25% of 850 Illinois quail hunters surveyed by the Illinois Department of Conservation (IDOC) in 1991 considered an opening date of the first Saturday in November too early, whereas 60% thought it about right (Anderson and David 1992). The apparent difference in the 2 surveys probably reflects the tendency for dissatisfied persons to volunteer opinions more readily than satisfied ones (Young 1966:81). Prior to 1980, less than half (45%) of the hunters who mentioned closing dates felt the season should be extended. During the 1980's, however, 80% of such respondents wanted to hunt later in the year. Fifty-six percent of hunters surveyed by IDOC considered an early January closing to be too early (Anderson and David 1992).

DISCUSSION

Attitudes and opinions regarding bobwhite management have evolved substantially among both quail hunters and wildlife professionals over the past 4 decades. For example, stocking was a popular and visible part of the overall upland game-bird management program in Illinois during the 1950's, 60's, and 70's. The IDOC provided day-old chicks to sportsmen's clubs who raised and released the birds at about 8 weeks of age to augment wild populations. In 1981, the agency publicly acknowledged that this 40-year-old program had been a biological and economic failure (Ambrose 1981) and attempted to convert it into a put-and-take operation by first encouraging then requiring participating organizations to release birds just before or during the hunting season. In 1986, the IDOC discontinued propagating bobwhite in state facilities, but continued to purchase chicks from private breeders for distribution to sportsmen's clubs through 1990.

Public and professional attitudes regarding the role of predators in natural communities have also changed significantly over the years. Illinois placed its last previously unprotected raptor, the great-horned owl (*Bubo virginianus*) on the protected list in 1959. Bounties on red and gray foxes (*Vulpes fulva* and *Urocyon cinereoargenteus*) were ended in 1973, although both species are still hunted and trapped. As of 1982, only 2 Illinois counties were still paying bounties on coyotes (*Canis latrans*) although there has been a

year-long open hunting season on the species since 1979.

Coincident with the renunciation of predator control and stocking as viable management options has been increased emphasis on habitat restoration and management by the IDOC and other natural resource agencies (Kenney 1985). In addition, there have emerged new habitat opportunities associated with federal farm programs (Jahn and Schenck 1990). It is therefore not surprising, but nonetheless encouraging, that Illinois quail hunters have demonstrated a progressive level of sophistication over the past 4 decades evinced by increased appreciation of the importance of habitat coupled with correspondingly fewer demands for unproductive practices such as stocking.

On the other hand, present-day hunters tend to demand more recreational use of the resource than did their predecessors despite the fact that the current season length of 60-65 days is about twice as long as in the early 1950's (Fig. 6). We find this attitude somewhat disturbing at a time when the resource base may be shrinking. It is difficult to reconcile a demand for longer and later seasons with the apparent inverse relationship between bobwhite abundance (indexed by total harvest) and season length in Illinois over the past 35 years (Fig. 7), even if no cause and effect is assumed. It is tempting to speculate that hunters in the 1980's merely reflected the prevailing societal attitude of the decade (i.e., "me first"). We must remember, however, that many present-day hunters do not benefit from a long-term perspective such as provided by Fig. 7, either because they are too young or because they do not have access to reliable information. For many, conditions have not deteriorated appreciably during their hunting careers; and may, in fact, have even improved for those who began hunting in the late 70's. Thus, it may not be surprising that some hunters are demanding more consumptive use of the resource than is perhaps biologically justified (Roseberry 1987, 1990).

MANAGEMENT IMPLICATIONS

Wildlife management is increasingly directed by socio-political considerations as well as biological factors. It is expedient, therefore, for agencies to be cognizant of hunter attitudes and concerns when formulating management programs and practices. Unfortunately, the wishes of hunters, and the influence they exert, are not always consistent with sound resource management.

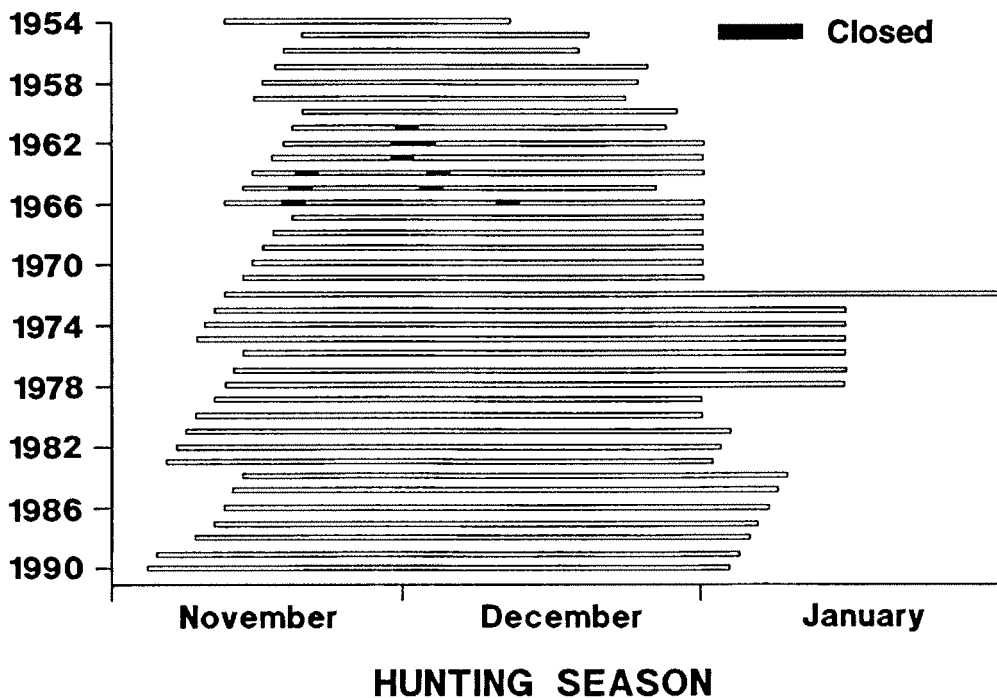


Fig. 6. Illinois bobwhite hunting season dates, 1954-90.

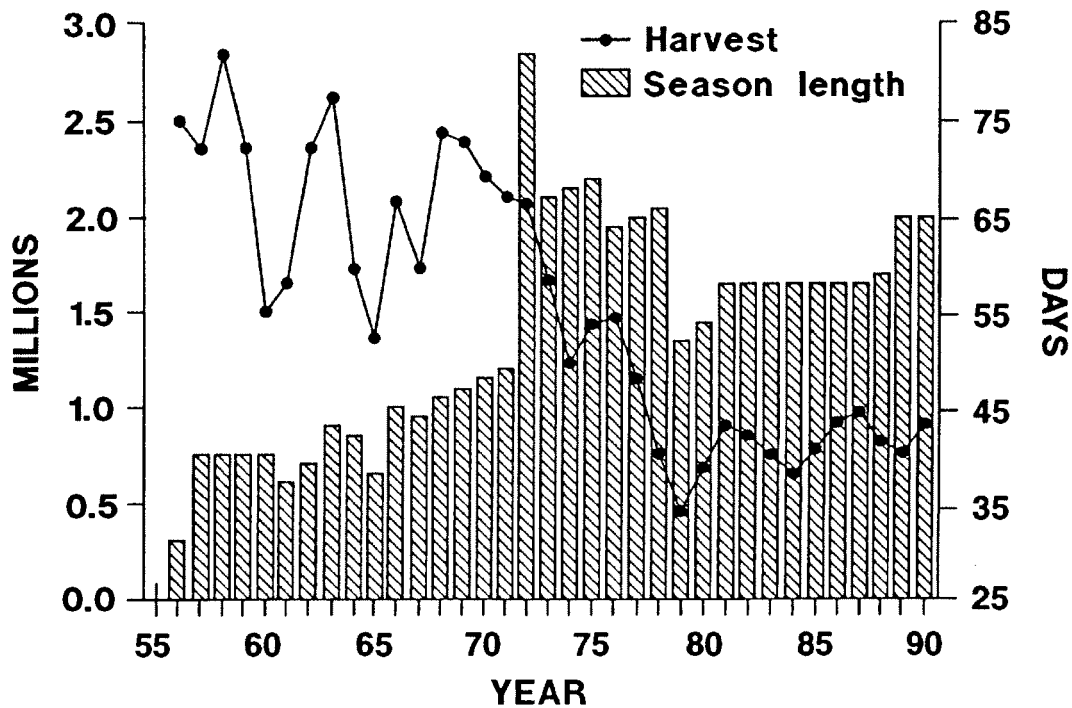


Fig. 7. Length of bobwhite hunting seasons in Illinois and estimated annual harvests, 1956-90.

Dahlgren et al. (1977) reported that Iowa hunters scored higher than nonhunters in a test of "wildlife knowledge"; however, Peterle and Scott (1977) found that support for scientific wildlife management declined among Ohio hunters between 1960 and 1974. When hunter opinion is at variance with biological reality, wildlife biologists must address the problem through education. To accomplish this, we must (1) determine prevailing attitudes and perceptions among the various segments of the hunting community, (2) identify the source or basis of these attitudes and perceptions, and (3) select and implement effective modes of information transfer from wildlife professional to hunter.

Program support from a well-informed public has always been important to the wildlife profession (Gilbert 1977), but never more so than now. All too frequently, lack of public support (perceived or real) leads to usurpation of policy- and decision-making powers by legislators or lay groups.

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