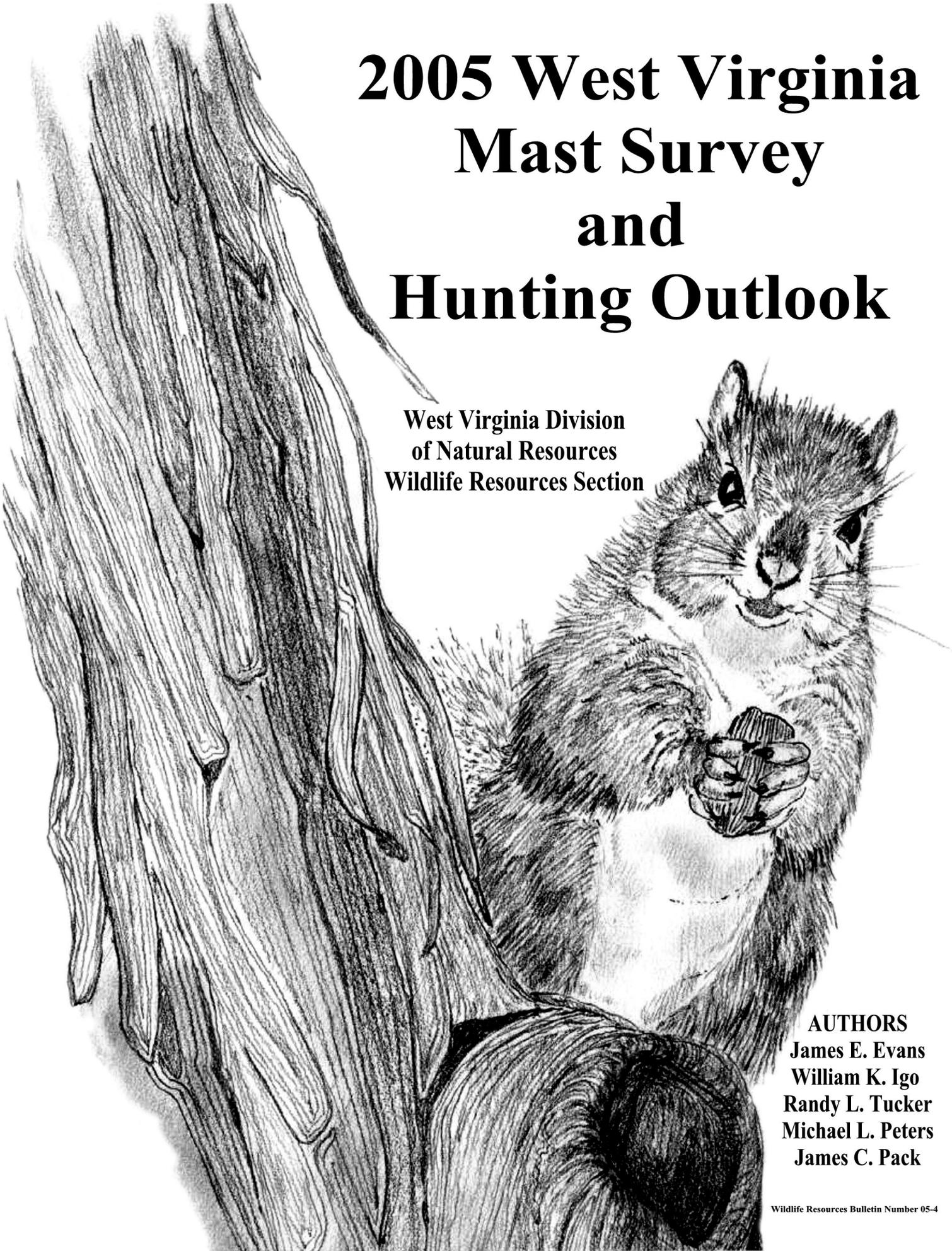


2005 West Virginia Mast Survey and Hunting Outlook

West Virginia Division
of Natural Resources
Wildlife Resources Section



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2005 MAST SURVEY

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The Division of Natural Resources (DNR) in cooperation with the Division of Forestry has annually surveyed the State for the last 35 years to determine mast abundance of important trees and shrubs. This information on the quantity of wildlife food is provided to our cooperators, our hunters, and the news media.

Two hundred fifty-two locations, covering all regions of West Virginia, were surveyed in 2005. Wildlife managers, foresters, wildlife biologists, retired wildlife managers and biologists, several conservation officers, one Natural Resources Commissioner, and a few selected other cooperators devoted their time to collect data. The survey would not be possible without the input of the above people. We sincerely thank everyone, and we extend our special thanks to retired persons and sportsmen that gave their time and effort without any monetary compensation. We seriously doubt that we could maintain good coverage of the state without their help and without the extra effort of those that conduct multiple surveys.

Many wildlife species are highly dependent on mast produced by our trees and shrubs. The amount of energy produced from mast is more important for survival of many wildlife species than forage from agriculture crops and herbaceous plants. Seeds and fruits from trees and shrubs are necessary for not only overwinter survival but also to assure wildlife is in good physical condition to reproduce. Because of the importance of mast conditions, biologists and wildlife managers are able to forecast black bear, squirrel, white-tailed deer, wild boar, and wild turkey population changes and harvests.

This year for the first time in the last 5 years the mast index is slightly above average. This is good news! We'll take an average mast year after the last 4 years of poor mast. The combined index of all the mast species surveyed was slightly above normal (Fig 1). Dry conditions during the early spring followed by rain in late May must have been good for flowering of many of our mast species. Good 2004 flowering conditions in the white oak group carried over into 2005 into the red oak group that takes two years to produce mature acorns.

The good news for 2005 is that scrub, red, black, and scarlet oak are better than last year (Table 1). Also, beech, walnut, and hickory nut crops for 2005 are well above last year. Beech and hickory nut crops are near the 35-year average production while walnut is well above average. Because of the increase in beech and walnut mast, the combined index of beech, hickory, oaks, and black cherry is slightly above average (Figure 2).

The index of all oaks combined is slightly above our 35-year average (Figure 3). Last year white oak mast was good and this year, as expected, the red oak group improved significantly (Table 2). This is two years in a row with near normal acorn production. Good acorn production is important because they are the most valuable mast species in West Virginia.

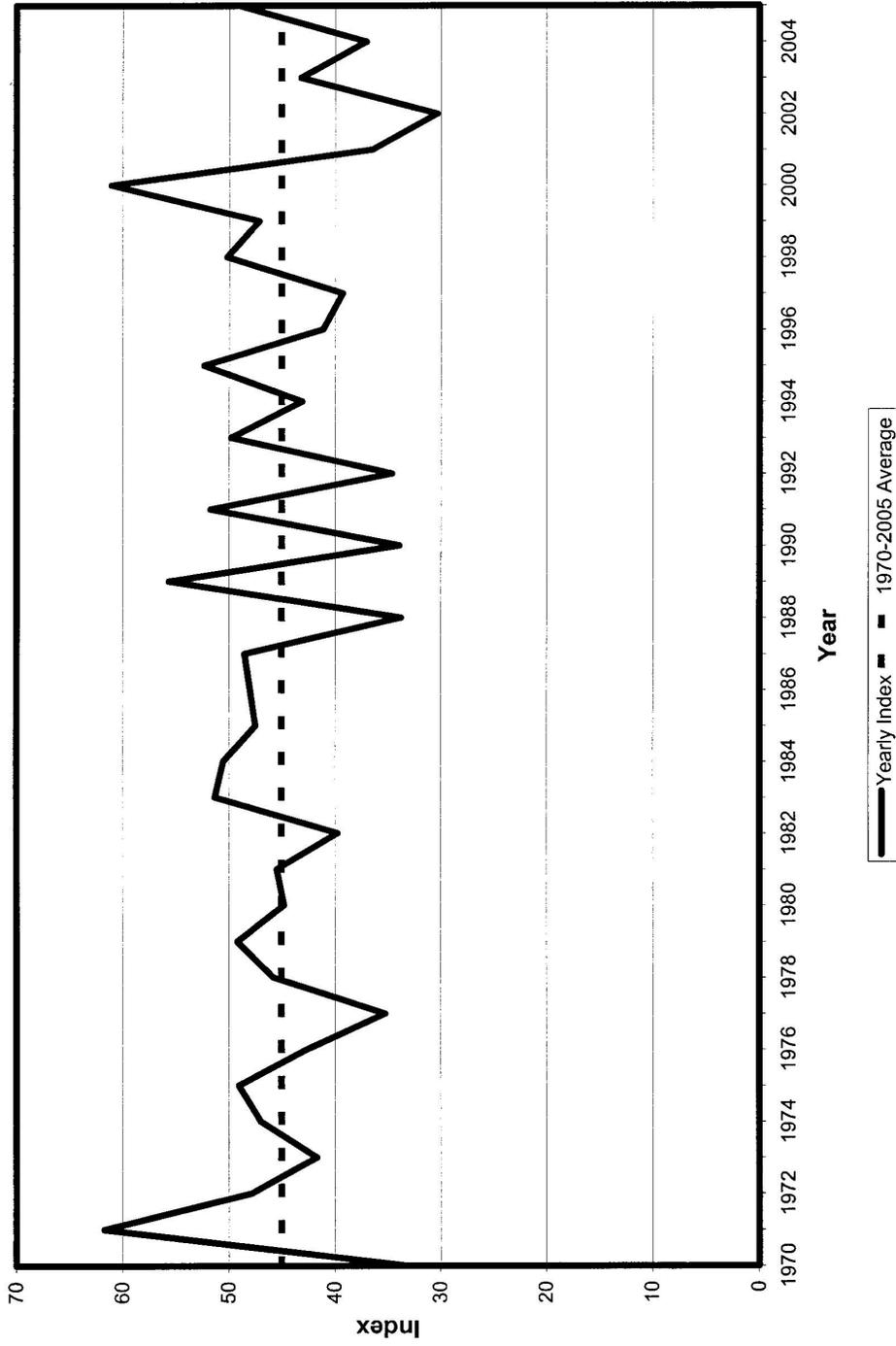


Figure 1. Indices of all mast species combined, 1970-2005.

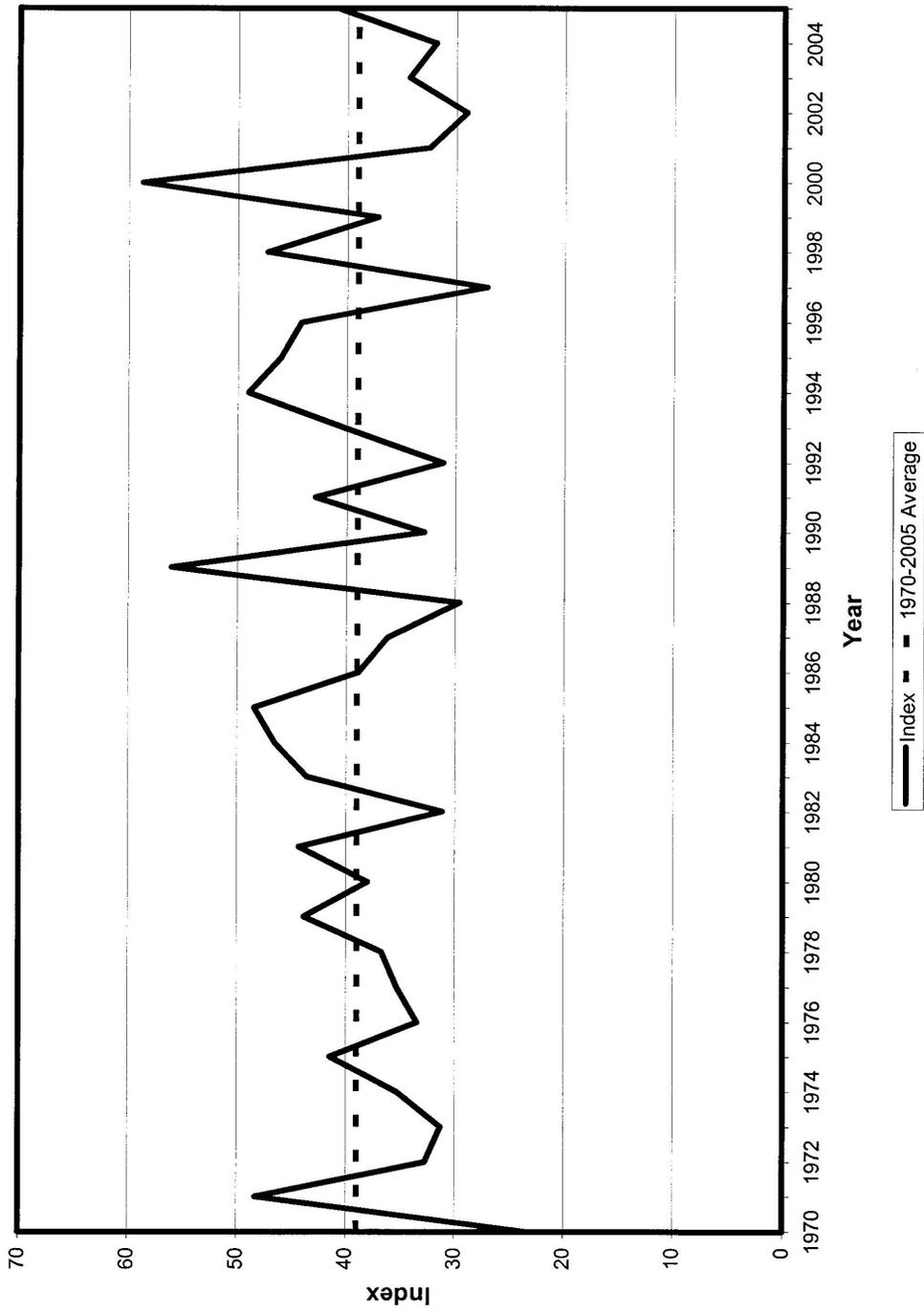


Figure 2. Indices of beech, hickory, oaks, and black cherry, 1970-2005.

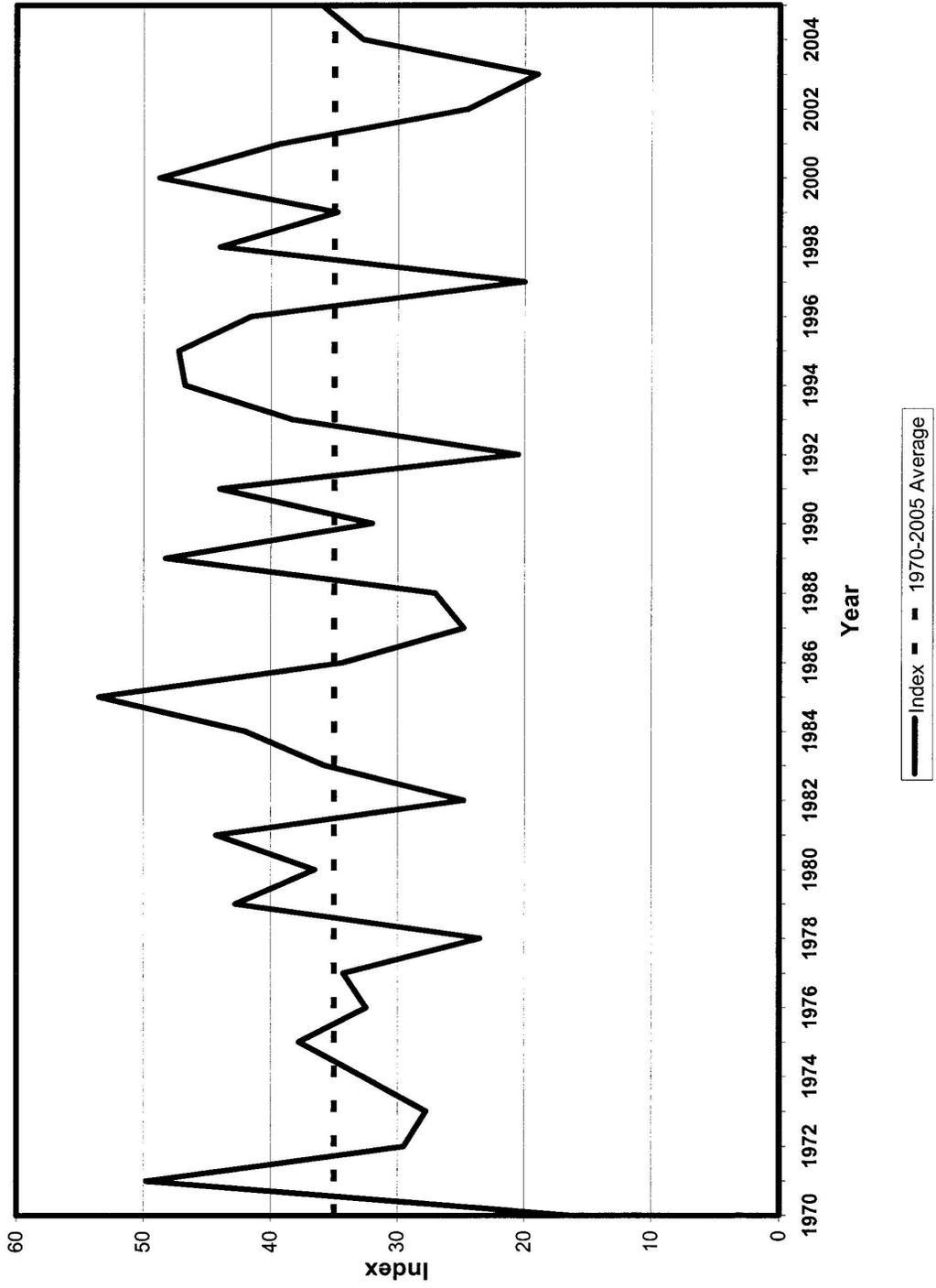


Figure 3. Index of oaks, 1970-2005.

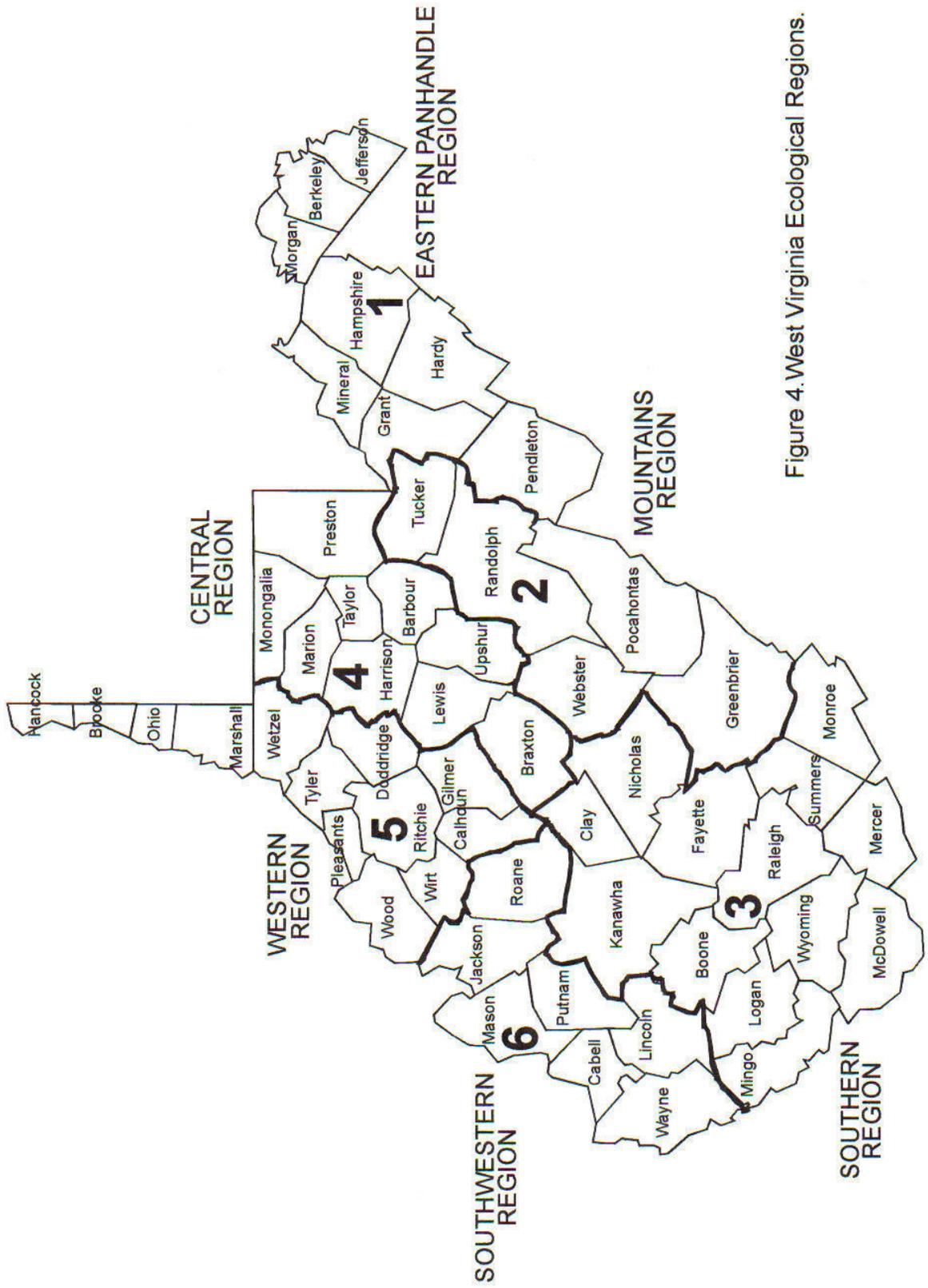


Figure 4. West Virginia Ecological Regions.

Last year we observed a poor crop of hickory nuts and we are glad to report that this important mast species is slightly above average this year.

The survey of black cherry shows that production is 29% above last year, and well above average. Yellow-poplar production is down slightly from last fall, and the rate was below our 35-year average.

The production of soft mast in our understory trees and shrubs other than sassafras is generally good and produced more mast than last fall. Indices were higher for grape, hawthorn, crabapple, dogwood, blackberry, apple, and greenbrier. Apple and crabapple production was exceptional this year with crabapple up 69% and apple up 71%.

Statewide, no major differences in mast conditions were noted in regard to elevation except beech, black cherry, scrub oak, grape, and dogwood mast were better at lower elevations. There were several regional differences of mast production at different elevations which are given later in this report.

When we started the mast survey in 1970, our main purpose was to use it to forecast squirrel populations and hunting outlook. Current mast conditions impact overwinter survival and reproductive success of squirrels in the spring. Last year the acorn crop was good enough to carry over more squirrels and improve the number of litters with the end result being slightly more squirrels for hunters in 2005 despite the poor hickory nut crop in 2004. This year, beech nuts and red and black oak acorns will largely have to replace the white oak acorns as staples for squirrels. Because of the abundance and distribution of oaks and hickories, there should be a sufficient amount of food to again produce a few more squirrels in 2006. However, because of timber harvesting and the poor mast years we have had in recent years, squirrel numbers will not be at record high levels this year or 2006.

It is recommended that hunters review the regional trends in mast as shown in Tables 3 and 4 to learn of food conditions in their region of the state. There are always some regional differences. Readers not familiar with our regions should refer to Figure 4 to determine the ecological region where they hunt.

REGION 1 (EASTERN PANHANDLE)

Mast conditions in 2005 are significantly better than 2004 for about all mast species surveyed except for beech, walnuts, white oak, chestnut oak, yellow-poplar, and sassafras. In addition, most species had more mast than average. Notable exceptions were that beech, white oak, and chestnut oak averages were 25% or greater below normal.

Hunters should note that the hickory, red and black oak, scarlet oak, and black cherry mast indices more than doubled the 2004 results. Although walnut production was not higher than 2004, production was still above average.

Mast from most understory trees and shrubs is more abundant than last year. Hunters should note that the grape, hawthorn, dogwood, blackberry, greenbrier, and apple mast is significantly better than last fall. Also, most understory trees and shrubs surveyed produced more mast than the norm for this region.

It is important to point out that a number of mast producing trees and shrubs produced better in the lowlands than the ridgetops. The hickory and dogwood mast was much better in the lowlands and mast from beech, grape, scrub oak, yellow-poplar, and sassafras was also slightly better at lower elevations.

In consideration of the abundance of hickory, above average amount of walnuts, and good crops of red, black, and scarlet oak acorns, gray and fox squirrel populations should overwinter well and high numbers should improve hunting for next fall due to higher overwinter survival and more litters next spring and summer.

REGION 2 (MOUNTAINS)

The beechnut crop in the Mountains is about the same as last year. Walnut production improved while white oak and chestnut oak mast are not as good. Unlike the Eastern Panhandle, the Mountains declined 39% in production of hickory nuts.

White oak and chestnut oak acorns are down more than 50% from last year. Fortunately, red, black, and scarlet oak acorn production is better and will compensate for the decline in abundance of white and chestnut oak.

In our northern hardwood habitat, wildlife will benefit from a 52% increase in the mast index of black cherry. With the decline in beech in this region due to beech bark disease, black cherry is becoming an even more important stable food for white-tailed deer, ruffed grouse, wild turkeys, and black bear. Unfortunately, only black, red, and scarlet oak and black cherry have mast indices above the average for this region.

Trees and shrubs in the understory did not produce as well in this region as most other areas of the State, but production was near average for most mast species. Notable exceptions are that the crabapple crop is better than last year, the apple crop is about the same, and they are both above average for this region. On the negative side, grape, greenbrier, and sassafras fruit production is down and below average.

As observed in the Eastern Panhandle, some mast species had better production at lower elevations. For example, red oak, black oak, black cherry, crabapple, apple, dogwood, and greenbrier had 10% or higher indices in the lower ridges and valleys than at or near the ridgetops.

Based on mast conditions, squirrel populations are not expected to improve in this region next year. Mast from red, black, and scarlet oak and walnut will compensate some for the

decline in hickory, white oak, and chestnut oak acorns and will prevent a drastic drop in numbers.

REGION 3 (SOUTH)

Production of white oak and chestnut oak in the Southern Region is lower than last year, and red, black, and scarlet oak acorn crops, as in other regions, are better. The black, red, and scarlet oak indices more than doubled last year's numbers. Hickory, walnut, and black cherry mast conditions are also better than last year. The beechnut crop and yellow-poplar mast are on a par with last year.

Except for hickory, white oak, and chestnut oak most overstory trees surveyed produced more mast than the 1971-2005 average for this region.

Most understory trees and shrubs had more mast than last year. The dogwood crop more than doubled and apple indices improved by over 90%. Only grape and sassafras had lower indices than 2004. Most of the understory trees and shrubs had higher mast indices than the 35-year average.

The only difference recorded in regard to mast conditions by elevation are walnut, hickory, chestnut oak, grape, blackberry, and greenbrier had slightly more mast at lower elevations while red and black oak acorn production was better on the ridgetops.

REGION 4 (CENTRAL COUNTIES)

As we get into the central and western counties, mast conditions are beginning to take on somewhat different patterns. The decline in white and chestnut oak mast is less severe in this region. Walnut and hickory nut production is better than last year, but hickory production is lower than the 35-year average. The red and black oak mast is better than last year but are 15% below the average for this region, while white oak acorns and chestnut oak acorns are less abundant than last year.

Black cherry mast is up 40% from last year and above average production for this region. Hunters should note that the amount of grape, hawthorn, crabapple, and dogwood mast is up from 2004. Apple production is 70% above last year and 60 percent above the average for this region.

Changes in the amount of mast in regard to elevation in this region indicate slightly better oak mast at higher elevations and slightly better beech, walnut, grape and dogwood mast in the bottomlands.

Based on mast abundance, it appears that this region will likely have similar numbers of squirrels in 2005.

REGION 5 (WEST)

Mast conditions in the western part of the state appear very good this year. Most mast species abundance was significantly better than last year. Beech, walnut, hickory, white oak, chestnut oak, scarlet oak, and black cherry were all better than the 35-year average in this region. The western and the southwestern were the only regions with better white oak and chestnut oak production than the average. Walnut production was 302% above last year.

Understory trees and shrubs such as grape, scrub oak, hawthorn, crabapple, and dogwood, had equal or increased mast production from last year. Apple and yellow-poplar also produced well this year. Of the 18 mast species surveyed, only the amount of sassafras, blackberry and greenbrier fruit were less abundant than last year.

Hunters should note that chestnut oak, black and red oak, scrub oak, and yellow-poplar were more abundant at high elevations, and beech and black cherry mast were better at lower elevations.

Squirrel numbers should improve significantly in this region next year. Of the significant mast species only red and black oak are below the 35-year average production.

REGION 6 (SOUTHWEST)

The southwestern counties have excellent crops of beechnuts and walnuts this year. The hickory nut, white oak, chestnut oak, and scarlet oak acorn crops are about the same as last year. This region and Region 5 were the only areas of West Virginia that had similar to better production of white and chestnut oak acorns.

Understory mast trees and shrubs surveyed generally produced similar to better mast than last year. Especially noteworthy to hunters are improvements in the grape, crabapple, and common apple mast over last fall.

Other good news is that most (15 of 18) trees and shrubs surveyed have more mast than average. The species with mast conditions below average production for this region were black and red oak, black cherry, scrub oak, and sassafras.

This region and Region 5 were the only areas of West Virginia where more mast species produced better at higher elevations than our lowland valleys. Hickory, walnut, most oaks, and sassafras “hit” better at higher elevations than down low. The only species that had significantly more mast in the lowlands was beech which are 21% higher in the valleys and creek bottoms.

Squirrels will not have any food shortages this year, and this should result in similar to slightly more squirrels next fall.

Table 1. 2005 statewide index compared to 2004 mast index.

Species	2004	2005	Percent Difference
Beech	14	38	172
Walnut	15	55	267
Hickory	33	50	53
White Oak	50	29	-42
Chestnut Oak	35	23	-33
Black or Red Oak	27	49	83
Scarlet Oak	19	43	120
Black Cherry	45	58	29
Grape	36	40	11
Scrub Oak	25	40	62
Yellow poplar	45	42	-7
Hawthorn	41	57	39
Crabapple	43	73	69
Dogwood	33	52	56
Blackberry	54	58	8
Greenbrier	38	38	0
Sassafras	35	33	-6
Apple	49	84	71
Other	66	60	-10

Table 2. 2005 statewide index compared to 34-year average mast index.

Species	34-year Average	2005	Percent Difference
Beech	38	38	0
Walnut	36	55	52
Hickory	47	50	7
White Oak	36	29	-19
Chestnut Oak	31	23	-24
Black or Red Oak	42	49	17
Scarlet Oak	32	43	33
Black Cherry	45	58	28
Grape	41	40	-3
Scrub Oak	40	40	0
Yellow poplar	45	42	-7
Hawthorn	48	57	19
Crabapple	53	73	37
Dogwood	48	52	7
Blackberry	53	58	9
Greenbrier	47	38	-18
Sassafras	42	33	-20
Apple	54	84	57
Other	67	60	-11

Table 3. Percent difference in mast index by species between 2004 and 2005 by ecological region.

Species	Ecological Region					
	1	2	3	4	5	6
Beech	0	0	0	-9	191	400
Walnut	0	31	188	237	302	275
Hickory	167	-39	29	33	83	0
White Oak	-63	-79	-62	-29	152	11
Chestnut Oak	-57	-82	-51	-22	126	0
Black or Red Oak	101	61	126	52	159	30
Scarlet Oak	138	33	116	53	0	0
Black Cherry	248	52	13	40	2	-30
Grape	74	-17	-19	7	26	30
Scrub Oak	88	203	87	0	0	0
Yellow-poplar	-15	-63	2	-7	59	41
Hawthorn	173	-6	60	37	54	0
Crabapple	0	0	60	82	88	147
Dogwood	46	30	112	56	45	18
Blackberry	54	16	2	-2	-19	5
Greenbrier	47	-7	21	-18	-34	7
Sassafras	-10	-56	-7	-9	-2	8
Apple	68	15	94	70	153	74
Other	-19	-23	-1	-6	2	0

Table 4. Percent difference in 2005 mast index by species from average of years (1971-2005) by ecological region.

Species	Ecological Region					
	1	2	3	4	5	6
Beech	-55	-23	15	-49	42	38
Walnut	64	0	40	25	69	91
Hickory	72	32	-21	-17	36	50
White Oak	-26	-56	-42	-28	23	15
Chestnut Oak	-45	-75	-36	-21	11	33
Black or Red Oak	67	21	39	-15	-15	-5
Scarlet Oak	48	17	67	-5	21	34
Black Cherry	115	16	40	14	27	-8
Grape	21	-15	-15	-33	6	52
Scrub Oak	25	13	6	-100	112	-100
Yellow-poplar	33	-63	-3	-22	29	2
Hawthorn	85	-8	36	8	58	4
Crabapple	46	23	33	24	61	56
Dogwood	-18	-20	13	8	24	26
Blackberry	50	-4	25	8	-5	18
Greenbrier	11	-24	8	-39	-37	19
Sassafras	-4	-79	-13	-21	7	-7
Apple	24	43	57	60	66	60
Other	-4	-24	-19	-16	3	-19

2005 WEST VIRGINIA HUNTING OUTLOOK

Jim Pack (Ret.), William Igo, Jim Evans, Michael Peters, and Randy Tucker

Most of the information used for this hunting outlook is observation information provided by field personnel of the Wildlife Resources and Law Enforcement Sections of the Division of Natural Resources (DNR), foresters from the Division of Forestry, retired DNR wildlife managers and biologists, and a few other volunteer cooperators. These individuals make the publication of our hunting outlook possible. Hunting predictions are also based on current and previous mast conditions from the yearly mast surveys. Mast often dictates survival and reproductive success of many wildlife species the following year. Brood reports of ruffed grouse and wild turkeys are used as major predictors of populations and harvests. Other important information incorporated to judge upcoming harvests and animal numbers include the Spring Gobbler Survey, Bowhunter Survey, Raccoon Field Trial Survey, nuisance complaints, adjustments to bag limits, permit allocations, and hunting season type and length.

Table 1 is a quick check chart of predicted statewide harvests of our major game species for 2005. Harvests of most game species will be higher this fall and winter. Projected deer kill by season and region are shown in Table 2. Predicted fall wild turkey harvests are illustrated in Table 3. Hunting prospects on a regional basis are provided in Tables 4 through 8. This outlook is designed to forecast general prospects and is not intended to predict hunting conditions at specific locales. Particularly, with the best mast conditions that we've seen in the last 5 years, hunters are encouraged to scout their favorite hunting spots to learn more about food and game conditions.

GRAY AND FOX SQUIRRELS

The factor influencing squirrel numbers more than any other is the mast conditions from the previous year. The reason is that food conditions from the previous year have a major impact on overwinter squirrel survival and the number of litters produced by squirrels. Squirrels normally produce a summer litter, but the spring litter is very dependent on overwinter food availability. In 2004 the oak mast index was slightly below normal and hickory production was poor; however, white oak and chestnut oak produced well. Forecasters are predicting that **the squirrel population will be slightly higher this fall!**

We need good crops of hickory and acorns to reach high populations. Because we have had several years without a good acorn crop, the total food supplies for squirrels have not been as good in recent years. Look for squirrel populations to be up in 2006 because of good hard mast production this year. We should have more squirrels this fall, but hunters should not expect "a squirrel behind every tree". We have a way to go to have a bumper crop of squirrels.

Squirrels will be “cutting” hickory nuts early so look for good hunting in the hickory groves during early fall. This year good beech production will provide an alternative food source for squirrels. Walnuts hit well throughout most of the state so look for fox squirrels to congregate in the walnut coves. Hunters also need to keep in mind that the second litter of squirrels is usually not available until after mid-October so those that hunt later in the season will benefit from the addition of juvenile squirrels to the population.

COTTONTAIL RABBITS

Cottontail numbers for the last four years have been increasing, but **mast survey participants are forecasting that rabbit hunting in 2005-2006 will be about the same as last year.** Rainfall was good in the early spring but dry summer months will decrease available cover and food. If tropical hurricanes bring late summer rains, cover may improve for the hunting season. Hunters should look for good hunting along major river valleys, orchards, and abandoned farm lands.

RACCOONS

Raccoon populations should be up this year due to a better acorn crop last year. Most field personnel are **forecasting better ‘coon hunting this fall.** Better oak mast this year should result in better productivity and higher ringtail numbers for 2006. Near normal grape production and good apple and crabapple will keep raccoons scattered in most of the regions.

DEER

Several factors influence the forecasts of West Virginia’s deer harvest for 2005. Evaluations by field personnel, mast crop, and hunting regulation changes can impact the projected harvest. Considering all of these factors, **the total 2005 white-tailed deer harvest should be similar or slightly lower than 2004 harvest levels.** Statewide, the buck firearms kill should be similar. Because several regions had healthy apple crops and only moderate acorn crops, archery season should prove to be similar or slightly higher than for 2004. Although red oak acorns are common in all regions (except region 4), field personnel expect hunters to harvest fewer deer during the antlerless and muzzleloader seasons. Several counties are closed or have reduced hunting opportunities. Hunters should review the 2004-2005 Hunting and Trapping Regulations summary for detailed instructions concerning specific bag limits and season dates.

BLACK BEAR

With hard mast production higher at a statewide level, we anticipate another low bow harvest. Bruins should tend to den later, however, in the traditional gun counties (Mountain Region) with the sufficient red oak, scarlet oak, and scrub oak crops—unless severe winter weather drives them in early. If there is a normal winter then a good gun kill should occur.

Growing populations in southern West Virginia has resulted in some type of gun season now occurring in all counties there. Statewide, most cooperators are predicting **the total bear harvest should be higher.**

WILD TURKEY

Wild turkey brood counts are currently running about 22% below last year's production and are about 80% of our average brood production. The brood season was characterized by an early cold and wet spring and below average broods reported in May, June, and July. The dryer summer months apparently allowed birds to re-nest successfully as brood reports in August are near record numbers reported for this month.

Regionally, brood counts are down 57% in the Eastern Panhandle counties and up 30% in the Mountains of Tucker, Randolph, Webster, Pocahontas, and Greenbrier counties. The Western and Southern ecological regions have below normal brood reports this year but are still higher than the rest of the State.

It is difficult to predict the wild turkey harvest this fall because the traditional fall hunting counties in the Eastern Panhandle have decreased brood production while the counties in the Mountains have increased reports. In the non-traditional fall counties only Hancock, Brooke, Ohio, Mason, Summers, and Wirt counties qualify for a fall season. Additionally, black cherry and red and black oak mast were good in the Mountain counties and will make fall turkey flocks scattered and more difficult to hunt.

Considering contrasting information, the harvest likely will be similar to last year. If the kill is higher, it will be because the Mountains and Northern Panhandle harvest figures will be high enough to overcome the lower numbers in our Eastern Panhandle. Additionally, Mason, Summers, and Wirt counties will likely have decent harvests this fall.

Hunters should keep in mind that white and chestnut oak acorns in our Eastern Panhandle produced poorly this year. Birds will be likely scattered and feeding on red and black oak acorns as well as an abundant wild grape crop.

In the oak areas in the Monongahela National Forest (MNF) counties, red oak and black oak will be the major food items. Some scarlet, red, and black oak will also be used heavily at higher elevations. In the northern hardwood habitat in the MNF, black cherry and grapes will be the major food item because beechnuts are scarce.

In the Northern Panhandle, oak acorns will be the major food item and this is the only region with abundant white oak as well as good red and black oak.

Fourteen traditional fall-hunted counties will be opened to a 4-week split fall season (Oct. 22 - Nov. 19). Preston county will be open Oct. 22 - Nov. 5. Six counties (Brooke, Hancock, Ohio, Mason, Summers, and Wirt) will be open October 22- 29.

Hunters should read the 2005-2006 Hunting and Trapping Regulations Summary, which is available at local license agents and Division of Natural Resources (DNR) offices, to learn more about changes in wild turkey hunting regulations this year. The summary thoroughly explains changes in seasons and regulations.

RUFFED GROUSE

We could almost take last year's report and print it again for the 2005-2006 season! Brood counts for 2005 are currently up 42% from last year (they were up 56% in 2004 from 2003). This means two years, thankfully, that we have seen increases in "ruff" production. But, like last year, the majority of the increase, and most broods observed, are in the Mountain Region. Most surveyors feel that hunting will be similar to the 2004-2005 season, with predictions of better hunting in the southerly counties of Boone, Greenbrier, Logan, Raleigh, and Wyoming. With the increased production the last two years, **flushing rates statewide may improve slightly.**

Hunters should note that although soft mast production statewide is better than last year, regional differences in certain species abundance does occur. Flushing rates in the Mountains should be better around dogwood clumps and thickets of grape and thornapple that hit. Bird dogs should be busier and happier in greenbrier, dogwood, and thornapple covers in southern counties, while hunters in Central and Western Regions will have better success in grape, dogwood and hawthorn coverts. With widespread and abundant soft mast conditions in the Eastern Panhandle, birds should be widely dispersed causing lower flushing rates.

WILD BOAR

The elimination of the December gun season in 2003 has caused, as intended, severely reduced harvests. This season was curtailed to lower the kill and try to increase boar numbers. Again, there will be no December firearms season for 2005. A one-week early firearms season (October 24-29) has been set and archery season will be in effect from October 15 to December 31 in Boone, Logan, Raleigh, and Wyoming counties. **The boar harvest should remain low.** Better acorn production the past two years will increase production of piglets, but the razorbacks' demise will hinge on the extent of logging and mining activities.

BOBWHITE QUAIL

The status of the bobwhite quail in the Mountain State continues to cause concern. Observations in the Eastern Panhandle declined from last years predictions. Some of the Ohio River counties showed improved reports this year. The biggest problem with bobwhite numbers continues to be habitat loss due to human developments and a decline in farming in the Ohio River and Potomac River valleys. Severe winters of 1978 and 1982 severely affected the distribution and abundance of coveys and they have never recovered in the marginal covers.

Table 1. 2005 quick check chart of predicted statewide wildlife harvests.

Species	More	Similar	Lower
Gray & Fox Squirrels	Slightly Higher		
Cottontail Rabbits		X	
Ruffed Grouse	X		
Raccoon	X		
Whitetail Deer		Similar to Slightly Lower	
Wild Boar		X	
Wild Turkey		X	
Bear	X		

Table 2. 2005 quick check chart of deer harvest forecast by region and season.

Region	Season				
	Bow	Buck	Antlerless	Muzzleloader	Total Kill
1	Similar	Similar	Similar	Similar	Similar
2	Similar	Similar	Lower	Lower	Similar to Slightly Lower
3	Similar to Slightly Higher	Similar	Similar	Similar	Similar
4	Similar	Similar	Similar	Similar	Similar
5	Similar	Similar	Similar	Similar	Similar
6	Similar	Similar	Similar	Similar	Similar
Statewide	Similar to Slightly Higher	Similar	Similar to Slightly Lower	Similar to Slightly Lower	Similar

Table 3. 2005 quick check chart of wild turkey harvest forecast by region.

Region	Higher	Similar	Lower
1			X
2	X		
3	X		
4	Closed	Closed	Closed
5			X
6	X		
Statewide		X	

ECOLOGICAL REGION 1

Table 4. Hunting prospects in Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, and Pendleton Counties.

Game Species	2005 Outlook
Gray and Fox Squirrel	<p>A good crop of white, black, and red oak acorns in 2004 resulted in better overwintering of squirrels and a slightly better population in 2005. Mast conditions are better this year than last so squirrels will be dispersed. Look for squirrels early to be in hickory groves because of a good hickory nut crop. Walnuts hit well in this district and the fox squirrels will be found in the walnut groves. Mast conditions were reported better at lower elevations.</p> <p>The best reports come from Grant and Pendleton counties.</p>
Rabbits	<p>Rabbit numbers were up last year and it is predicted to be about the same this year.</p> <p>The 2 furthest east counties in the panhandle – Berkeley and Jefferson – have the best reports.</p>
Ruffed Grouse	<p>Soft mast, especially grape, has improved this year in the Eastern Panhandle. Brood reports remain low for this region. Low and high elevations have about the same amount of mast. White oak did not hit well and the grouse will not be using these favorite feeding areas. Grouse will be dispersed on the good soft mast. Hawthorn did well in this region. Look for a slightly lower harvest in this region.</p>
Raccoon	<p>Surveyors are predicting more ‘coons this year which will mean more action for “Old Blue”. Raccoons will be feeding on the good soft mast and red and black oak acorns.</p> <p>Hardy, Jefferson, and Mineral counties have the best reports.</p>
Deer	<p>The deer harvest in this region should remain about the same as last year. Grass in most fields is probably dried up due to the drought conditions in this area. Hunting forested areas particularly red, black, and scarlet oak stands will be a good bet.</p> <p>Hunters should note that west of North Fork of the South Branch in Pendleton County is closed for the antlerless season. The bag limit of antlerless deer in Grant County and in Pendleton County east of the North Fork has been reduced to one. The remaining counties in the region are open to antlerless hunting with a bag limit of 4 on private land. Review the 2005-2006 Hunting and Trapping Regulations for specific details.</p>

Table 4. (Cont'd) Hunting prospects in Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, and Pendleton Counties.

Game Species	2005 Outlook
Turkey	<p>Brood production in this region is down and mast production is up. Both factors will lead to less turkey dispersed over a larger area. Surveyors have noted less turkeys than in 2004.</p> <p>Grant County is the only county predicted to be better than 2004. All counties in this region except Jefferson are open to fall hunting (Oct. 22-Nov. 19).</p>
Bobwhite Quail	<p>Surveyors are divided on whether there are more or less quail in this region. Human development continues to take the better quail habitat in the eastern portion of the panhandle.</p>
Black Bear	<p>Bear hunting during the archery season will probably be more challenging with more mast than last year dispersing the bruins. However, better mast may keep bears out of the dens longer giving gun hunters a better chance at bagging a bear.</p> <p>The majority of reporters believe there are more bears this year. Pendleton is the only county which reported less bears than 2004.</p>

ECOLOGICAL REGION 2

Table 5. Hunting prospects in Greenbrier, Pocahontas, Randolph, Tucker, and Webster Counties.

Game Species	2005 Outlook
Gray and Fox Squirrels	<p>Slightly higher numbers of bushytails are forecast due to better white oak and chestnut oak production in 2004. Hickory nuts, white oak and chestnut oak acorns are reported down this year. Look for squirrels in black oak, red oak, and scarlet oak stands which have more acorns this year. There is also a decent walnut crop. Better mast conditions are likely to be found along streams, rivers, and other lower elevations.</p> <p>The best outlook for squirrel hunting is from Randolph County.</p>
Rabbits	<p>According to our surveyors, rabbit numbers are about the same as last year. As with the rest of the state, the drought is reducing food and cover for cottontails.</p> <p>Greenbrier and Randolph counties report the best hunting prospects.</p>
Ruffed Grouse	<p>Finally! Brood reports are up 36% over last year and 7% over the 5-year average. However, prognosticators are predicting hunting will be similar to last year. Hunters should check crabapple thickets and don't pass up scrub oak patches which hit well this year.</p> <p>The best survey comes from Greenbrier County.</p>
Raccoon	<p>Harvest should be similar to 2004 in this region according to reporters. Look for 'coons at lower elevations where mast conditions are better.</p> <p>Greenbrier County has the best reports.</p>

Table 5. (Cont'd) Hunting prospects in Greenbrier, Pocahontas, Randolph, Tucker, and Webster Counties.

Game Species	2005 Outlook
Deer	<p>The buck harvest should be similar to 2004, but the total deer harvest should be down due to antlerless season closures in this region. Apple and crabapple did well in this region again this year. Don't forget about the scarlet oak, red oak, and black oak stands which hit well. Black cherry also did well in this region and should attract a few deer.</p> <p>The antlerless season is closed in Pendleton, Pocahontas, Randolph, Tucker, Webster, and part of Greenbrier County. Refer to the 2005-2006 Hunting and Trapping Regulations for specific information.</p> <p>The best reports come from Pocahontas County.</p>
Turkey	<p>Expect a slightly better turkey harvest this fall in this region. Brood reports are up 20% over last year but only slightly above the 5-year average. Unlike last year birds will be more concentrated due to poorer mast conditions. Look for birds in black cherry stands and red oak, black oak, and scarlet oak in the oak-hickory forests.</p> <p>The best report comes from Pocahontas County.</p>
Black Bear	<p>Two years in a row now our faithful staff has split on whether this fall will have a similar or higher bear kill. Perhaps we should prognosticate a highly similar bear kill. The decreased amount of mast should produce a higher archery harvest; while low mast production could mean earlier entry to dens and a decreased gun harvest.</p> <p>Once again, Randolph County has the best reports.</p>

ECOLOGICAL REGIONS 3 & 6

Table 6. Hunting prospects in Boone, Cabell, Clay, Fayette, Jackson, Kanawha, Lincoln, Logan, Mason, Mercer, Mingo, Monroe, McDowell, Nicholas, Putnam, Raleigh, Roane, Summers, Wayne, and Wyoming counties.

Game Species	2005 Outlook
Gray and Fox Squirrels	<p>Similar hunting is predicted for bushytails in the southern regions. Hunters should note that walnuts and hickory nuts produced well, especially at lower elevations. Squirrels should still be concentrated in hickories as the season begins. Late season hunting should be good in red, black, and scarlet oaks, which produced better along the ridges. Some cooperators reported beech hit “tremendous” in certain locales; hunting these hotspots could result in a quick bag limit. Wise nimrods will scout areas a few days before season, looking for fresh beech and hickory cuttings.</p> <p>Best surveys are from Region 3 counties: Fayette, Raleigh, Mercer, and Summers.</p>
Rabbits	<p>Drought conditions along the Ohio River counties in Region 6 has reduced covers and bunny numbers. However, sufficient summer rains in most of the Region 3 counties has resulted in lush cover and higher rabbit numbers in that area. If a late summer drought doesn’t occur, hunting should be better in this section of the State.</p> <p>Best reports are from Boone, Logan, Mason, McDowell, Raleigh, Summers, and Wyoming counties.</p>
Ruffed Grouse	<p>Flushing rates have improved in this region and the kill has steadily risen the last several years. Surveyors predict similar to slightly better hunting this season. Dogwood, greenbrier, hawthorn, and crabapple fruits produced well in many areas, with grape output down from last year. The birds will be there—but it’s such rough territory to hunt!</p>

Table 6. (Cont'd) Hunting prospects in Boone, Cabell, Clay, Fayette, Jackson, Kanawha, Lincoln, Logan, Mason, Mercer, Mingo, Monroe, McDowell, Nicholas, Putnam, Raleigh, Roane, Summers, Wayne, and Wyoming counties.

Game Species	2005 Outlook
Raccoon	<p>Almost all surveys are forecasting better 'coon hunting. About every county qualified as a "best" survey county! The sound of "treein" hounds should fill many nights in this region for 2005. Although masked bandits will generally be well dispersed, later hunting may be better along the ridges where red oak is abundant.</p>
Deer	<p>Field personnel from most counties feel overall whitetail harvests should be similar to last year. With white and chestnut oak production down, deer may be concentrated in the abundant apple and crabapple crops during early archery season. Jackson, Mason, and Putnam counties are open for Unlimited Class N, Nonresident Class NN, and three additional Class N/NN and valid RG/RRG licenses. Lincoln, Summers, and portions of Kanawha and Wayne counties are open to limited resident Class N antlerless hunting. Hunters should review the 2005-2006 Hunting and Trapping Regulations summary for details on various seasons in different counties.</p> <p>Best reports come from Cabell, Kanawha, Logan, Raleigh, Summers, and Wayne counties.</p>
Turkey	<p>Brood counts are way down from last year in these regions. This means the spring gobbler kill will be down in this area in 2007, since production is directly proportional to harvest two years in the future (the spring kill is expected to be good in 2006 based on very good productivity in 2004). Mason and Summers counties will be open for a one-week fall season (October 22-29). The traditional 4-week season (Oct. 22-Nov. 19) will occur in Monroe and Nicholas counties, where surveyors are predicting better hunting.</p>
Bobwhite Quail	<p>Declining to stable numbers are again reported in these regions. Populations are similar to last year along the Ohio River counties (Mason, Cabell, and Wayne) and similar to slightly better along some of the large reclaims in Boone, Logan, and Mingo counties.</p>

Table 6. (Cont'd) Hunting prospects in Boone, Cabell, Clay, Fayette, Jackson, Kanawha, Lincoln, Logan, Mason, Mercer, Mingo, Monroe, McDowell, Nicholas, Putnam, Raleigh, Roane, Summers, Wayne, and Wyoming counties.

Game Species	2005 Outlook
Black Bear	Another good bruin harvest is forecast, with better hunting surveys from almost all counties in these regions. Boone, Fayette, Kanawha, and Raleigh counties are again open for an early fall gun season allowing dogs (Oct. 31-Nov.5) and a December gun season with dogs (Dec. 5-31). Also many counties have been added to the December firearms season <u>without</u> dogs—please consult the 2005-2006 Hunting and Trapping Regulations for details.
Wild Boar	The hog harvest should remain low for 2005, as managers try to increase populations. There is a one-week firearms season Oct. 24-29 and archery hunting is allowed from Oct. 15-Dec. 31, residents only.

ECOLOGICAL REGION 4

Table 7. Hunting prospects in Barbour, Braxton, Harrison, Lewis, Marion, Monongalia, Preston, Taylor, and Upshur Counties.

Game Species	2005 Outlook
Gray and Fox Squirrels	<p>Squirrel populations in this region are about the same as last year. But average mast conditions this year, an improvement over the past several years, should allow for better overwinter survival and an increase for 2006. Also, the more abundant mast conditions should disperse the squirrels and make hunting more difficult. Look for hickory to be “cut out” quickly and squirrels to disperse to more abundant scarlet, red and black oak as well as an abundant walnut crop.</p> <p>Harrison County should have more bushytails with other counties remaining about the same.</p>
Rabbits	<p>Hunting for cottontails should be about the same to slightly better than last year in this region. The mild and moist spring and early summer kept the grasses green and lush, ideal for food and good reproduction; however, a long dry spell during the summer months reduced cover.</p> <p>Braxton, Harrison, Preston, and Upshur counties all expect better hunting than last year.</p>
Ruffed Grouse	<p>Ruffed grouse populations are predicted to be about the same as last year in this region. Grape remains down (33% under the 35-year average) but is similar to last year. Most species of soft mast are similar to last year or better with crapapple, hawthorn, and dogwood hitting well this year. Hunters may wish to hunt these coverts rather than the grapevine thickets.</p>
Raccoon	<p>Raccoon numbers should be similar to last year in this region. Soft mast as well as red, black, and scarlet oak will attract “ringtails”. Black cherry produced well this year and should also attract raccoons.</p> <p>Lewis and Preston counties have best surveys.</p>

Table 7. (Cont'd) Hunting prospects in Barbour, Braxton, Harrison, Lewis, Marion, Monongalia, Preston, Taylor, and Upshur Counties.

Game Species	2005 Outlook
Deer	<p>The deer harvest is predicted to be about the same or slightly below last years harvest. Hunters should keep in mind that as deer populations approach management objectives, antlerless deer seasons and harvest will decrease. Apples and crabapples produced well this year, so don't forget about these orchards, especially during archery season.</p> <p>Most of the counties in this region are still open for antlerless season with a maximum bag limit of 4 deer on private land (using a combination of N/NN and unfilled RG/RRG licenses). The exceptions are Barbour, Preston, and Upshur counties where only one antlerless deer can be harvested. See the 2005-2006 Hunting and Trapping Regulations for specific details.</p>
Turkey	<p>Turkey brood observations were off to a slow start this season statewide but increased in August with a strong renesting of hens. Look for turkeys to be in red, black, and scarlet oak and black cherry stands which produced good mast this year.</p> <p>Preston County is open for the traditional 2-week fall season (Oct. 22-Nov.5) with the remaining counties in this region closed to fall hunting. Surveyors report almost identical turkey populations as 2004 and harvests should be similar.</p>
Black Bear	<p>Bear in this region are still doing well with 68% of surveyors reporting an increase in the bear population over 2004.</p> <p>Lewis, Marion, Monongalia, Upshur, and the western portion of Barbour County have a 4-week gun season (Dec. 5-31) without dogs. An abundance of bears, good mast conditions, and an extended gun season should lead to some good hunting this fall and winter.</p>

ECOLOGICAL REGION 5

Table 8. Hunting prospects in Brooke, Calhoun, Doddridge, Gilmer, Hancock, Marshall, Ohio, Pleasants, Ritchie, Tyler, Wetzel, Wirt, and Wood Counties.

Game Species	2005 Outlook
Gray and Fox Squirrels	<p>Squirrel populations in this region should be similar or slightly lower due to last year's poor mast production. Field personnel are predicting a similar harvest to slightly worse than 2004. In this region hard mast production is excellent. White oak, chestnut oak, black and red oak, beech, walnut, and hickory all produced a bumper crop this year. Squirrels will not have to forage long to fill their bellies. Hickory nut groves are probably the best bet for hunting. Look for better numbers of squirrels in 2006 in this region.</p> <p>Brooke, Marshall, and Ohio counties all have favorable reports this year.</p>
Rabbits	<p>Cottontails seem to be holding their numbers in this region with cooperators reporting similar numbers to last year. There will be better cover along the Ohio River and it's tributaries.</p> <p>Good surveys come from Brooke, Ohio, Ritchie, Wetzel, and Wirt counties.</p>
Ruffed Grouse	<p>Brood production was again poor in this region. Surveyors are estimating a harvest similar to last year. Look for grouse in dogwood, crabapple, and thornapple stands. Improved mast conditions in this region should overwinter better numbers of grouse in 2006. Hope for dry weather during the late May-June nesting period.</p> <p>Brooke and Ohio counties have best surveys.</p>
Raccoon	<p>Raccoon harvest should be similar to last year. With the good soft and hard mast conditions 'coons will be dispersed.</p> <p>Good reports come from Brooke and Ohio counties.</p>

Table 8. (Cont'd) Hunting prospects in Brooke, Calhoun, Doddridge, Gilmer, Hancock, Marshall, Ohio, Pleasants, Ritchie, Tyler, Wetzel, Wirt, and Wood Counties.

Game Species	2005 Outlook
Deer	<p>The deer harvest in this region is predicted to be similar to 2004 according to surveyors. Good mast conditions will mean deer are dispersed throughout the forest leading to difficult hunting. Look for the archery harvest to be down for this reason.</p> <p>Calhoun, Gilmer, and Roane counties have a one antlerless deer per county limit. The remaining counties in the region have a 4-deer antlerless bag limit on private land. Review the 2005-2006 Hunting and Trapping Regulations for further information.</p> <p>Marshall, Ohio, and Ritchie counties have the best reports for this region.</p>
Turkey	<p>Surveyors are reporting a harvest similar to 2004, but turkey broods are down 36% in this region compared to last year. Improved mast conditions will disperse birds throughout their range, making it a little tougher for the hunter this year. In addition, Marshall County will not have a fall turkey season this year since the spring harvest dropped below one gobbler per square mile.</p> <p>Four counties qualified for a fall turkey season (Oct.22-Oct. 29) this year: Brooke, Hancock, Ohio, and Wirt counties.</p>
Black Bear	<p>Black bear archery harvests should be similar to last year. But bears have more and better food this year making them likely to be dispersed. There is good apple and crabapple fruit this year; look for bears to be using these areas.</p> <p>This region remains closed to a gun season. The archery season is Oct. 15-Nov. 19. The best reports are from Calhoun, Marshall, and Wetzel counties.</p>

Cover Artwork by Mike Chedester

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