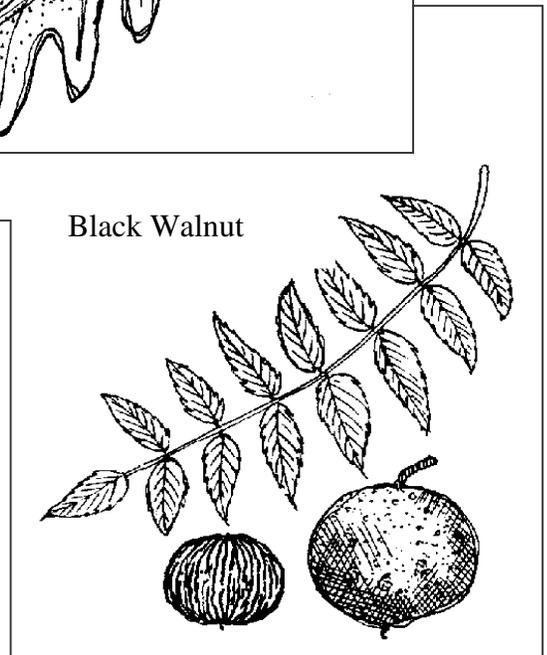
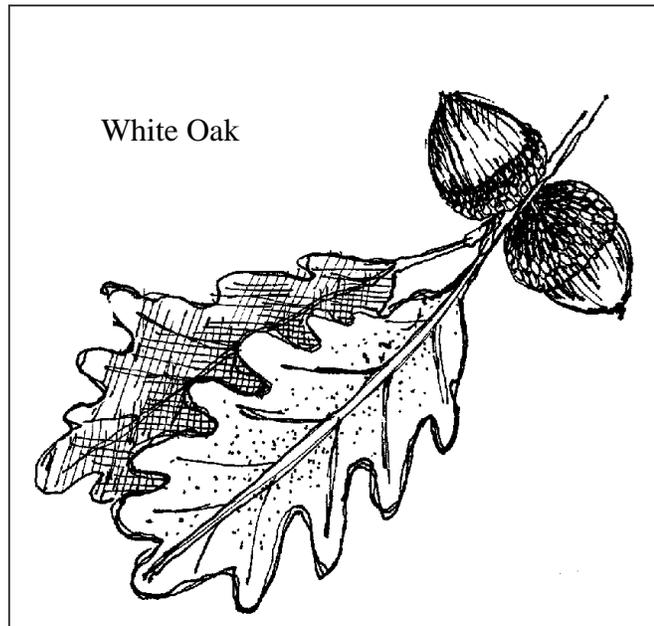


# 2004 WEST VIRGINIA MAST SURVEY AND HUNTING OUTLOOK



WEST VIRGINIA DIVISION OF NATURAL RESOURCES  
WILDLIFE RESOURCES SECTION

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# 2004 MAST SURVEY

**William K. Igo and James C. Pack**

The Division of Natural Resources (DNR) in cooperation with the Division of Forestry has annually surveyed the State for the last 34 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.

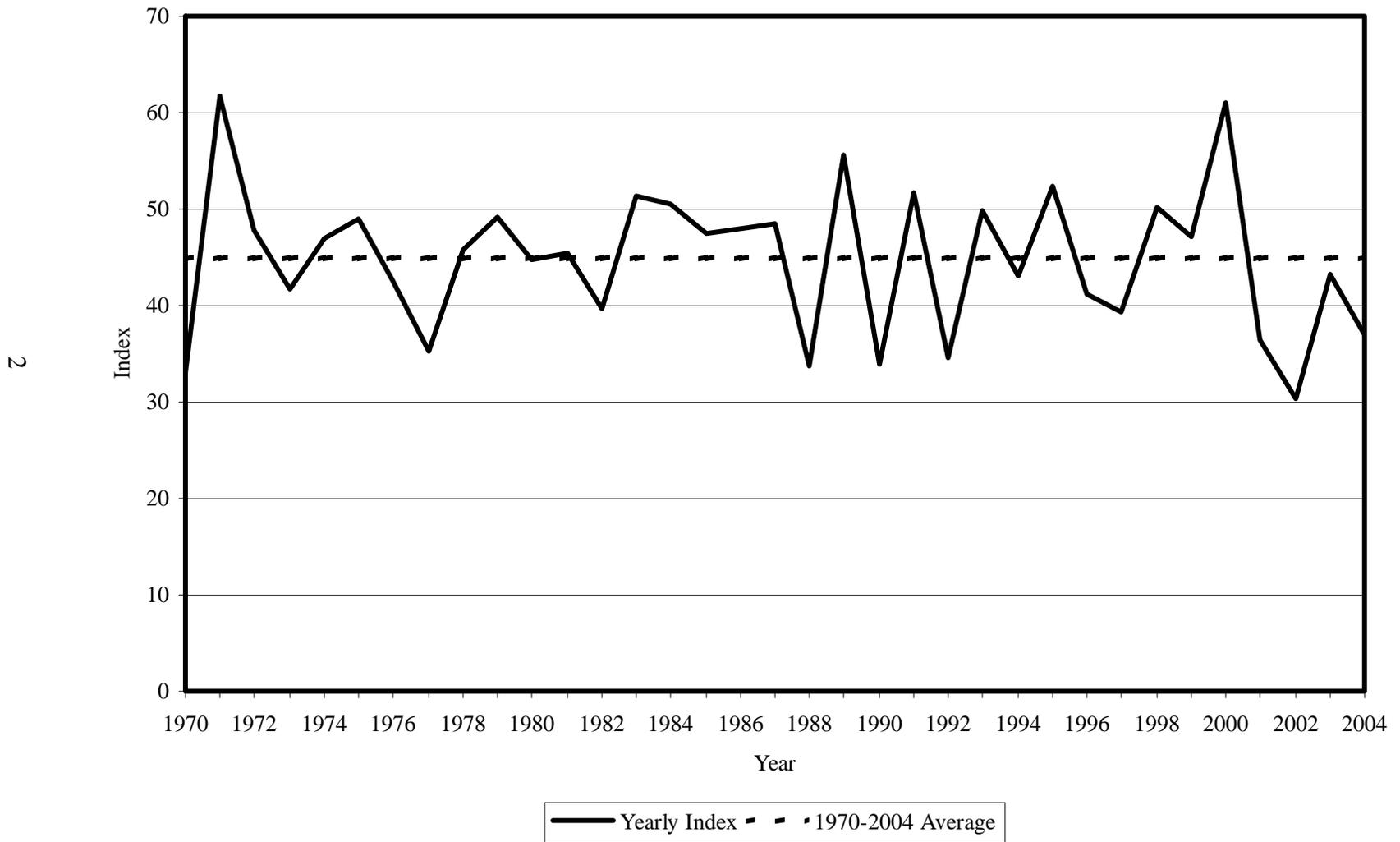
Three hundred thirteen locations, covering all regions of West Virginia, were surveyed in 2004. Wildlife managers, foresters, wildlife biologists, retired wildlife managers and biologists, several conservation officers, one Natural Resources Commissioner, and a few other selected cooperators devoted 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 the 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.

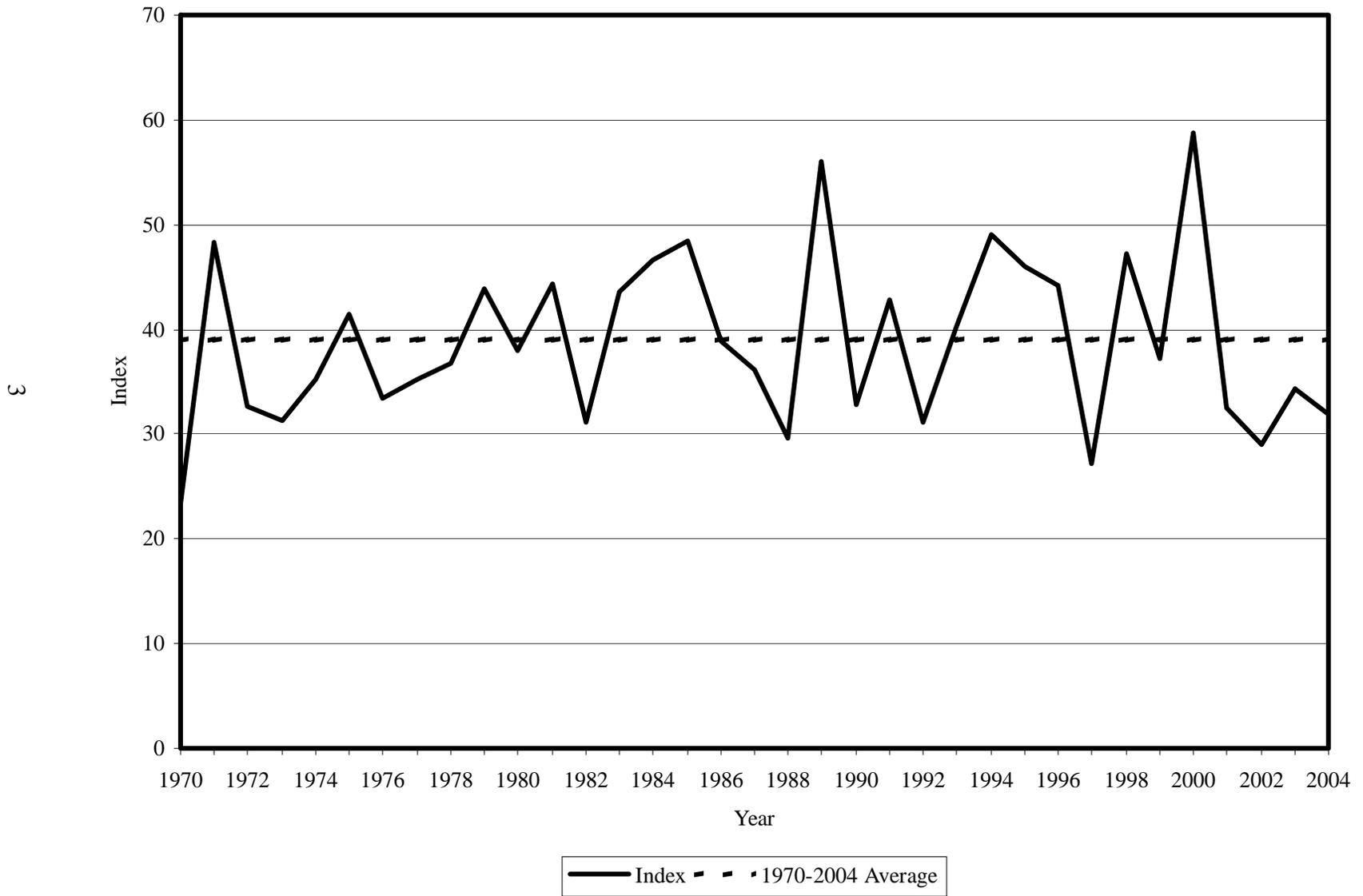
It seems like we cannot “buy” a good mast year during the last four years. The combined index of all the mast species surveyed was again below normal (Figure 1). Like 2003, frequent rains this spring and early summer were great for tree growth, but not for the flowering of some of our mast species. The poor 2003 flowering conditions carried over into 2004 in some of our oaks that take two years to produce mature acorns. In addition, late frosts this spring took a toll on mast production in some areas of the State.

The good news for 2004 is that white oak, chestnut oak, red and black oak, and scarlet oak mast crops are better than last year (Table 1). The white oak and chestnut oak indices more than doubled. The bad news in 2004 is the greater than 70% drop in bechnuts and walnuts and 48% drop in hickories. Because of this decline in the amount of hickory and beech mast, the combined index of beech, hickory, oaks, and black cherry is also below average (Figure 2).

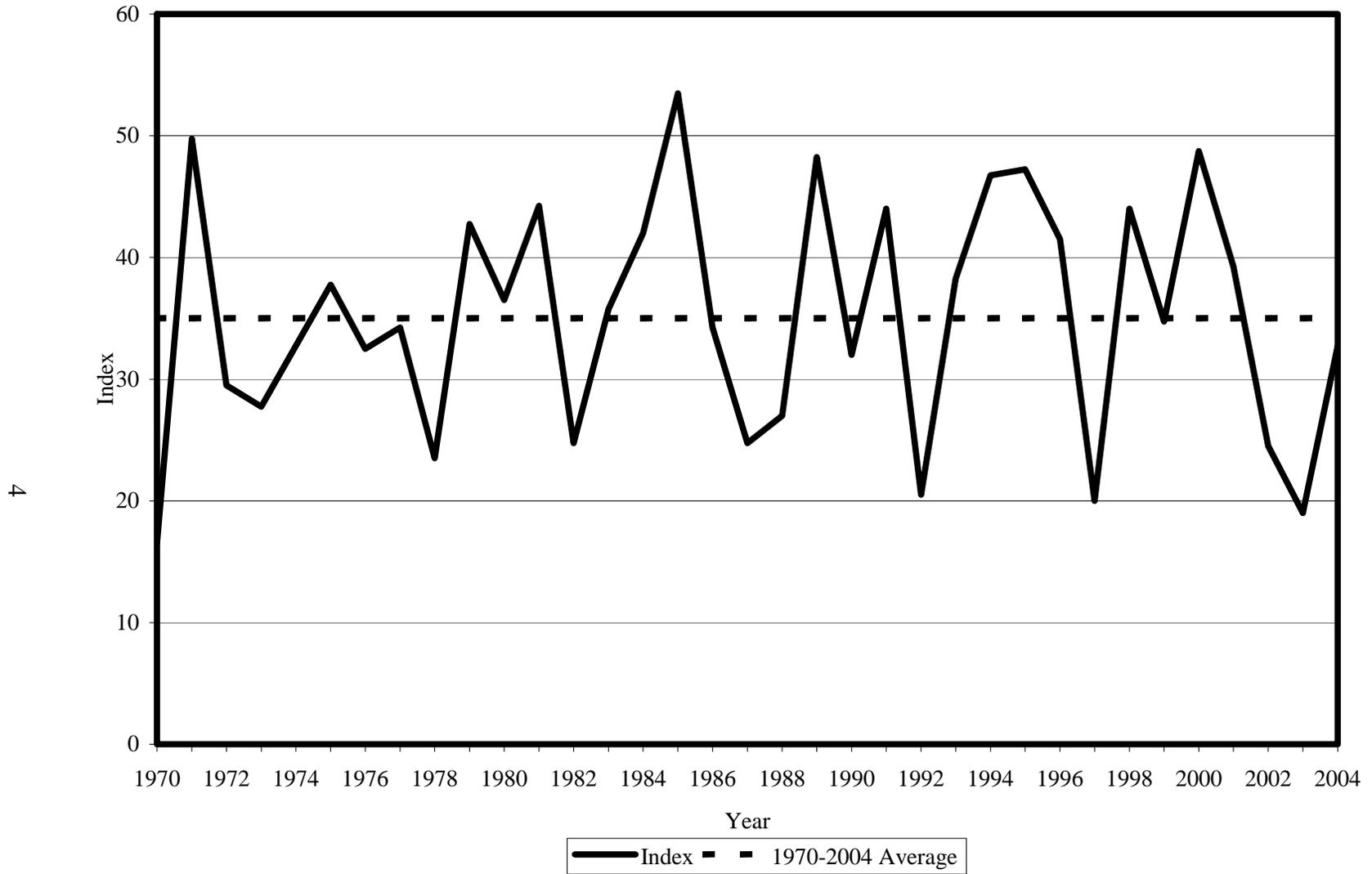
The index of all oaks combined is almost equal to our 34-year average (Figure 3). Last year oak mast was so scarce the index was the second lowest on record so observing a near normal crop of acorns is refreshing (Table 2). Improvement in acorn production is important because oaks are the most valuable mast species in West Virginia.



**Figure 1.** Indices of all mast species combined.



**Figure 2.** Indices of beech, hickory, oaks, and black cherry, 1970-2004.



**Figure 3.** Index of oaks, 1970-2004.

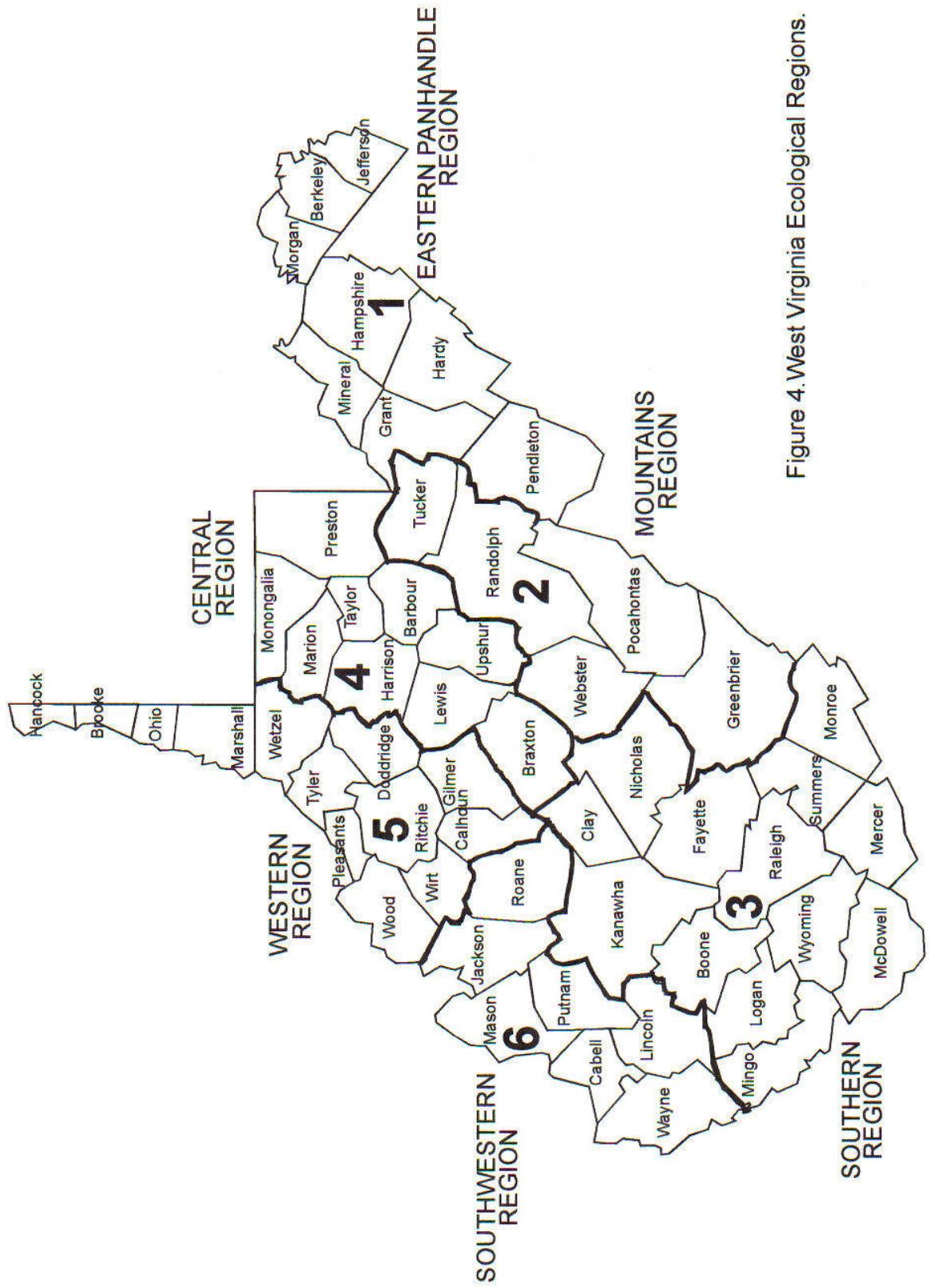


Figure 4. West Virginia Ecological Regions.

Not only is the amount of beechnuts, walnuts, and hickory nuts lower than 2003, they were below our average. Last year we observed a bumper crop of hickory nuts; therefore, we were not surprised that we did not have a repeat of these conditions.

The survey of black cherry shows that production is 37% below last year, but still average. Likewise yellow-poplar production is not as good as last fall, but the rate was equal to our 34-year average.

The remainder of the understory trees and shrubs was about evenly divided with some producing more mast than last fall while others had less mast. Indices were higher for grape, scrub oak, blackberry, greenbrier, and sassafras, but production is lower for hawthorn, crabapple, dogwood, and common apple.

Statewide, no major differences in mast conditions were noted in regard to elevation except white oak, hawthorn, and crabapple mast was more common at higher elevations

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 beechnut, walnut, and hickory mast crops were good enough to carry over more squirrels and improve the number of litters with the end result being slightly more squirrels for hunters in 2004, despite the poor acorn crop in 2004. This year, acorns will largely have to replace hickory nuts, walnuts, and beechnuts as staples for squirrels. Because of the abundance and distribution of oaks, there should be a sufficient amount of food to again produce a few more squirrels in 2005. 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 2005.

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)**

White oak, black oak, and red oak mast is significantly better in 2004 than 2003. Chestnut oak production is equal to last year, but higher than average in abundance. Unfortunately, beech, walnut, and hickory crops are not as good and are below average.

Mast from understory trees and shrubs is mixed, as was observed statewide. Grape, scrub oak, blackberry, greenbrier, and sassafras production is slightly better or about equal to last year, while hawthorn, crabapple, dogwood, and common apple had less mast. We are disappointed that most understory trees and shrubs indices were about equal or below the norm for this region.

No difference was detected in the amount of mast in the lowlands versus the high elevation sites examined except slightly more beechnuts and sassafras were found in the higher elevation areas.

In consideration of the abundance of oak mast in relationship to the squirrel population, there should be enough mast to produce slightly higher squirrel populations in 2005.

## **REGION 2 (MOUNTAINS)**

Like the Eastern Panhandle, this region has a poor crop of beechnuts and walnuts, but surprisingly the hickory crop is similar to last year. The acorn crop is about equal to 2003, but white oak and chestnut oak mast production is above our average for this region. Acorn abundance of other oaks is below the norm. Black cherry, an important food in the northern hardwood habitat in this region, is about par with last year in abundance, but unfortunately below average for this area. Yellow-poplar abundance is similar to last year and still above average.

Grape abundance more than doubled the quantity noticed in 2003. Scrub oak, blackberry, greenbrier, hawthorn, crabapple and apple mast is equal to or slightly better than last fall, but sassafras does not have as much mast. All of the understory trees and shrubs except for sassafras had lower indices than their averages.

Surveyors found more white oak, scrub oak, and yellow-poplar in the lowlands than up high. Slightly more red oak and black oak acorns were detected in the high elevation areas as well as hawthorn berries.

The squirrel population should be slightly higher next year in this region because of better white oak and chestnut oak mast crops and a near normal amount of hickory nuts.

## **REGION 3 (SOUTH)**

As one moves from the Northeastern part of the state into the southern counties, mast conditions follow a similar pattern for several tree and shrub species. Indices for beech and walnut declined by more than 50%. On the other hand, oak mast is more abundant than last year. Indices for white oak and chestnut oak more than doubled. Even more red oak, black, and scarlet oak acorns were found by surveyors than last fall. Compared to our 1971-2003 averages, the 2004 indices for beech, walnut, hickory, red oak, black oak, and scarlet oak is still below average while the white oak crop is over 50% above average and the chestnut oak acorn production is 33% above normal. Black cherry and yellow-poplar mast is slightly less than 2003, but still above or near the average for this region.

As observed in the previous two regions, the mast abundance of understory trees and shrubs is mixed. Grape increased by more than 50% this year. Blackberries, greenbrier, and sassafras are equal to or above last year in abundance; hawthorn, crabapple, dogwood, and common apple do not have as much mast as last year. Comparisons of our indices with our averages for understory trees and shrubs, unfortunately, shows only grape, blackberry, and sassafras as near normal in abundance.

Of the 18 mast species surveyed, only three showed any major difference in production between the highlands and lower lying areas. Yellow-poplar, blackberry, and sassafras had slightly more mast on the higher ridges than in lowlands.

Squirrel numbers will probably increase slightly next year in this region because there should be enough oak acorns for food for the current population and enough to increase survival and reproduction next year.

#### **REGION 4 (CENTRAL COUNTIES)**

As we get into the central and western counties, mast conditions are beginning to take on somewhat different patterns. Decline in bechnuts, walnut, and hickory are similar to the previous regions, but oak mast does not seem to be as good. White oak and chestnut oak production is better than last fall, but the frequency of trees with mast are not above average in contrast to the previous three regions. In addition the red and black oak acorn crop is not as good as last year and nearly 50% below the average for this region. Black cherry fruit and yellow-poplar mast production are not as good as last fall and are below our averages for the central part of the State.

The amount of grape, blackberry, greenbrier, and sassafras mast is equal to or better than last year. Hawthorn, dogwood, and common apple mast is not as good as 2003. As a matter of fact, the only understory mast species that are near average or better in abundance were blackberries and common apple.

Changes in the amount of mast in regard to elevation in this region indicate slightly better mast conditions at higher elevations. For example, more white and chestnut oak acorns were observed at higher elevations. Surveyors also found more hawthorn, crabapple, and blackberries at higher elevations.

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

#### **REGION 5 (WEST)**

Mast conditions also deteriorated significantly in this area of the state in 2004. There is less beech, walnut, hickory, and oak mast. Chestnut oak was the only oak that had more acorns than last year (12% increase). This is the only region in the state with less white oak than last year. Insect defoliation and weather conditions appeared to have a major negative impact on mast. In addition bechnut, walnut, hickory, and acorn production is below average. Black cherry is the only bright spot with a 13% increase over 2003 and a 26% improvement over the average.

Grape, blackberry, greenbrier, and sassafras fruit production is better than last fall, but declines in mast were noted for hawthorn, crabapple, and apple. The amount of dogwood is about par with last fall.

Of the 18 mast species surveyed, only the amount of black cherry, hawthorn, blackberry, and sassafras was equal to or better than average.

Field personnel did not notice any major difference in mast crops in regard to elevation for most of the 18 species surveyed. Noteworthy improvement of mast conditions were observed at higher elevations only for hickory, hawthorn, and crabapple..

Squirrel numbers will not improve in this region next year with only similar to slightly lower numbers predicted.

### **REGION 6 (SOUTHWEST)**

Like every other region, the beechnut, walnut, and hickory indices dropped significantly (71% or more). Unlike Region 5 to the north, our surveyors did find more white and chestnut oak acorns than last year. The red and black oak crops are lower, but scarlet oak mast did not change. Of the oak species surveyed, only white and chestnut oak production is above our 1971-2003 average. Black cherries are not as common as last year, but production is still above the norm for this region. Yellow-poplar mast is below last year in abundance and below the average.

The only understory tree or shrub with an equal amount or more mast than last year was grape, dogwood, and greenbrier; along with blackberry, these were the only species with indices equal to or above average.

Hunters and wildlife should find slightly more mast at higher elevations, especially for walnut, chestnut oak, and white oak, but abundance of mast for most of the 18 mast species surveyed was not noted in regard to elevation.

**Table 1.** 2004 statewide index compared to 2003 mast index.

<b>Species</b>	<b>2003</b>	<b>2004</b>	<b>Percent Difference</b>
Beech	47	14	-70
Walnut	72	15	-79
Hickory	64	33	-48
White Oak	24	50	111
Chestnut Oak	14	35	157
Black or Red Oak	23	27	16
Scarlet Oak	15	19	30
Black Cherry	53	45	-15
Grape	28	36	29
Scrub Oak	18	25	38
Yellow poplar	57	45	-21
Hawthorn	48	41	-15
Crabapple	60	43	-29
Dogwood	49	33	-33
Blackberry	51	54	6
Greenbrier	32	38	19
Sassafras	30	35	18
Apple	65	49	-24
Other	70	66	-5

**Table 2.** 2004 statewide index compared to 34-year average mast index.

<b>Species</b>	<b>34-year Average</b>	<b>2004</b>	<b>Percent Difference</b>
Beech	39	14	-64
Walnut	37	15	-59
Hickory	47	33	-30
White Oak	36	50	39
Chestnut Oak	31	35	13
Black or Red Oak	43	27	-37
Scarlet Oak	32	19	-41
Black Cherry	45	45	0
Grape	41	36	-12
Scrub Oak	40	25	-38
Yellow poplar	45	45	0
Hawthorn	48	41	-15
Crabapple	54	43	-20
Dogwood	49	33	-33
Blackberry	53	54	2
Greenbrier	47	38	-19
Sassafras	42	35	-17
Apple	54	49	-9
Other	67	66	-1

**Table 3.** Percent difference in mast index by species between 2003 and 2004 by ecological region.

Species	Ecological Region					
	1	2	3	4	5	6
Beech	-86	-64	-85	-62	-63	-82
Walnut	-94	-42	-75	-82	-80	-71
Hickory	-61	9	-49	-54	-54	-76
White Oak	154	0	277	8	-19	13
Chestnut Oak	0	0	316	35	12	29
Black or Red Oak	71	0	22	-14	-62	-23
Scarlet Oak	0	0	80	0	-92	0
Black Cherry	-5	-14	-10	-38	13	-13
Grape	9	107	52	13	14	-1
Scrub Oak	4	0	0	0	0	0
Yellow-poplar	-5	-1	-11	-25	-35	-55
Hawthorn	-49	61	-27	-36	-12	-51
Crabapple	-75	52	-21	-47	-28	-49
Dogwood	-49	-41	-50	-31	-3	5
Blackberry	17	-12	26	13	36	-20
Greenbrier	19	8	7	71	53	3
Sassafras	0	-37	14	84	72	-17
Apple	-40	16	-28	-27	-45	-26
Other	0	2	-25	8	-2	-33

**Table 4.** Percent difference in 2004 mast index by species from average of years (1971-2004) by ecological region.

Species	Ecological Region					
	1	2	3	4	5	6
Beech	-75	-66	-84	-45	-52	-73
Walnut	-88	-24	-52	-64	-59	-50
Hickory	-36	11	-39	-38	-26	-65
White Oak	106	115	57	1	-52	4
Chestnut Oak	28	41	33	1	1-52	34
Black or Red Oak	-17	-26	-39	-45	-68	-28
Scarlet Oak	-38	-12	-23	-39	-93	-71
Black Cherry	-39	-24	25	-19	26	33
Grape	-31	2	5	-38	-16	18
Scrub Oak	-34	-63	-44	32	56	-100
Yellow-poplar	59	1	-5	-17	-20	-28
Hawthorn	-33	-2	-16	-21	3	-16
Crabapple	-64	25	-17	-32	-15	-37
Dogwood	-45	-40	-47	-3	-15	7
Blackberry	-2	-17	23	11	18	13
Greenbrier	-26	-18	-11	-27	-3	11
Sassafras	7	-52	-7	-13	10	-14
Apple	-26	25	-19	-6	-35	-8
Other	19	-2	-18	-12	-4	-28

# 2004 WEST VIRGINIA HUNTING OUTLOOK

**William K. Igo and James C. Pack**

Most of the information used for this hunting outlook is data 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 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 2004. Harvests of most game species will be mixed 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 overall mast conditions are below normal this year, 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. Since we had a bumper crop of hickory nuts, walnuts, and beechnuts in 2003, **the squirrel population will be higher this fall!**

We need abundant 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 has not been as good in recent years. This means that we will 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 out” the available hickory nuts early so squirrels will be found using mainly white oak and chestnut oak acorns during the season. 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

Bunny numbers have been increasing over the last three years, and **mast survey participants are forecasting that cottontail hunting in 2004-2005 will be better** than last year. Rainfall was good throughout the spring and summer months, providing abundant cover and food. September rains from the hurricanes will keep cover lush at least to hunting season. Hunters with a brace or two of beagles should have some exciting days afield.

## RACCOONS

'Coon populations are still suffering from two years of poor acorn crops. However, most field personnel think **hunting should be similar or slightly improved from 2003**. Better oak mast this year (particularly the highly preferred white oak) should result in better productivity and higher ringtail numbers for 2005. Widely scattered acorn mast, and spotty soft mast (grapes, dogwood, crabapple, etc.) will have raccoons dispersed in most regions.

## DEER

Combining the forecasts of our deer experts with field personnel predictions throughout the State and looking at mast conditions over all regions, the **total white-tailed deer harvest should be similar to slightly higher** this year. Statewide, the buck firearms kill should be greater and the archery take should be similar to slightly better than 2003. Similar antlerless and muzzleloader harvests are expected. Bowhunters will have to hunt a little harder and be a little more picky where they locate stands in many areas because of plentiful white oak acorns. Proper pre-season scouting for both buck and bow seasons is advised to improve hunting efficiency and success.

Hunters need to review the 2004-2005 Hunting and Trapping Regulations summary for changes in seasons or bag limits in areas they plan to hunt. There were no major statewide or regional changes adopted this season. Like last season, hunters may take two antlerless deer per day on **private** land only during the Dec. 6-11 portion of the antlerless season. This second deer can only be pursued or taken after the first antlerless deer has been legally checked.

## BLACK BEAR

Our 2003 forecast for a similar to slightly higher total state bear harvest (setting a new record) was right on the money. This record was propelled by the record firearms kill (also predicted). However, that's where the glory ends! We also forecast a lower archery harvest – instead the bow kill was higher than the record harvest of 2003 (setting a new record). Perhaps we overlooked the increasing bear numbers in new areas of the State. Did we learn anything? Obviously not – we're again predicting a bow kill lower than 2003, based on widely scattered acorn crops keeping bruins dispersed. Gun harvests, however, should be similar or slightly higher (again setting a new gun record). The early November gun season with dogs and gun

season during the first week of buck season (without dogs) will occur in only four southern counties in 2004 (Boone, Fayette, Kanawha and Raleigh) with Nicholas County being dropped. This could somewhat dampen the total gun harvest as 96 bears were killed during those November seasons in Nicholas County. Statewide, we'll stick with the opinions of the majority of our cooperators: **the total harvest should be similar to 2004**. If it is slightly higher, it will again set a new State harvest record.

## **WILD TURKEY**

Wild turkey brood counts are currently running 46% ahead of last summer so, statewide, the wild turkey population is higher this year. This is good news after observing two years in succession with below average brood production.

Brood counts are up in all regions of West Virginia except one. The area where brood counts are lower, is the Eastern Mountains in the counties of Monroe, Greenbrier, Nicholas, Pocahontas, Randolph, Tucker, and Webster where the Monongahela and Jefferson National Forests are located. Wet and cool weather during the brood rearing season that reduced poult survival plus overwinter losses during the winter of 2003-2004 has resulted in this area having a below average wild turkey population

It is almost impossible to accurately predict the wild turkey harvest this fall because we do not have a uniform increase in number of broods. Most of the state that is open to fall hunting is in the Eastern part of the state. The wild turkey population is up in the Eastern Panhandle, plus the Northern Panhandle, but is it high enough to overcome the lower population in the Monongahela (MNF) and Jefferson National Forests counties? This year we also have a better acorn crop than last year so wild turkeys will be more widely distributed making it more difficult to locate them. In addition, on the negative side, there are not as many counties open to fall hunting in 2004.

**Considering contrasting information, the prediction is that the harvest likely will be similar to last year.** If by chance the kill is higher, it will be because of the Eastern and Northern Panhandle harvest figures will be high enough to overcome the lower numbers in our Eastern Mountains.

Hunters should keep in mind that wild turkeys will feed heavily on white, chestnut, and black oak in our Eastern Panhandle. In the oak areas in the MNF counties, white and chestnut oak along with grapes will be the major food items. Some 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 a major food item, but acorns are not as abundant as in the eastern part of the State.

Fourteen traditional fall-hunted counties will be opened to a 4-week split fall season (Oct. 23 - Nov. 20). Preston county will be open Oct. 23 - Nov. 6. Four counties (Brooke, Hancock, Marshall, and Ohio) will be open October 23- 30.

Hunters should read the 2004-2005 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**

Is there a glimmer of light in the gloom and doom predictions the last several years? Yes, but just a glimmer for bird hunters and their pointing pals! Last year, brood counts were 56% down from 2002; so far this year the counts are up 56% from 2003. However, the vast majority of this increase, and most broods observed, are in the Mountain counties. A few more broods have been seen in the Western region, but all other areas of the State show brood sightings on a par with 2003 counts. Hunters may want to check out areas in the Mountain region, particularly Pocahontas and Webster counties. There are still some promising surveys from others areas: Kanawha, Mercer, Raleigh, Summers in the South region; Barbour, Marion, Taylor, and Upshur in the northcentral portion of the State; and Tyler and Ohio counties along the western edge. Key remarks regarding food and cover conditions from surveyors: birds may more likely be flushed in grape clumps where fruits produced heavily but spotty, and watch those thickets bordering white oaks! Overall, **flushing rates should improve slightly with a few more birds in the bag** than last year.

### **WILD BOAR**

The hog season was adjusted in 2003 (December gun season eliminated) to try to increase boar numbers. The intent was to substantially lower harvests, which was accomplished. The harvest dropped from 38 in 2002 to only 5 in 2003. There will again be no December firearms season for 2004. An early gun season (Oct. 25-30) has been scheduled and the archery season will be in effect from October 16 to December 31. As designed, **the boar kill should remain very low**. Better acorn production should result in increased reproduction in 2005, and populations should improve. The comeback will depend on extent of habitat loss and continued good hard mast (acorns, beechnuts, hickory nuts) production.

### **BOBWHITE QUAIL**

The status of the bobwhite in the Mountain State continues to cause concern. There are very few observations in the Mountains and Northcentral regions. Similar to declining populations were reported in the Eastern Panhandle, with the most positive surveys from Berkeley, Jefferson, Morgan, and Pendleton counties. Most counties bordering the Ohio River show an overall declining trend in quail numbers. There were a few promising reports from Cabell and Lincoln counties. The biggest culprit in bobwhite declines appears to be habitat loss due to human developments, a move away from small grain plantings, and farmers adopting more clean farming practices. The severe winters of 1978 and 1982 severely affected coveys, and they've never recovered in the marginal covers.

**Table 1.** 2004 quick check chart of predicted statewide wildlife harvests.

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

**Table 2.** 2004 quick check chart of deer harvest forecast by region and season.

<b>Region</b>	<b>Season</b>				
	<b>Bow</b>	<b>Buck</b>	<b>Antlerless</b>	<b>Muzzleloader</b>	<b>Total Kill</b>
1	Similar	Higher	Similar	Similar	Similar
2	Higher	Higher	Similar	Similar	Similar
3	Similar	Higher	Similar	Similar	Similar
4	Higher	Higher	Higher	Similar	Higher
5	Higher	Higher	Similar	Similar	Higher
6	Similar	Higher	Similar	Similar	Similar
Statewide	Similar To Slightly Higher	Higher	Similar	Similar	Similar To Slightly Higher

**Table 3.** 2004 quick check chart of wild turkey harvest forecast by region.

<b>Region</b>	<b>Higher</b>	<b>Similar</b>	<b>Lower</b>
1	X		
2			X
3			X
4	Closed	Closed	Closed
5	X		
6	Closed	Closed	Closed
Statewide		X	

## ECOLOGICAL REGION 1

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

<b>Game Species</b>	<b>2004 Outlook</b>
Gray and Fox Squirrels	<p>Although predictions far better hunting improved over last year, cooperators were about evenly split between better-same-worse categories. Last year we reported squirrels would be concentrated where walnut, beech and hickory trees occurred. Not so this year—beechnuts and walnuts are scarce, and most hickory will be cut out before season starts. One surveyor commented, “Don’t waste your time in hickory woodlots this year. Follow the white oaks.” Most counties report spotty mast conditions, and our cooperators are encouraging hunters to scout oak stands, especially white oak. Acorn production is about as good at high elevations as low terrain. Best surveys are from Hampshire and Pendleton counties.</p>
Rabbits	<p>Bunny numbers are up this year and most cooperators are forecasting better hunting. Late season rains from Hurricane Francis will improve cover conditions, and provide good carry-over populations for hunters.</p> <p>Counties with best reports are Jefferson, Mineral, Morgan, and Pendleton.</p>
Ruffed Grouse	<p>Another terrible brood year in this region means another woeful year for bird hunters. Surveyors are predicting similar (which was frustrating) to poorer hunting. Grouse will be “where you find them,” as thornapple, dogwood and greenbrier crops are scarce and spotty at all elevations.</p> <p>Hardy, Mineral, and Morgan have the least miserable reports.</p>
Raccoon	<p>Like last year, similar to better ‘coon hunting is predicted. Ringtails may be working oak stands. Best surveys come from Jefferson and Pendleton counties.</p>
Deer	<p>Most field personnel report whitetail harvests should be similar to last year. However, many surveys say deer will be found less in and around fields but more in forested areas, particularly white oak stands.</p>

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

Game Species	2004 Outlook
Deer	<p>All counties in this region are open for antlerless hunting with a bag limit of 4 on private land using a combination of Class N or NN and unfilled RG or RRG licenses. Two antlerless deer may be taken on the same day on private land only during December 6-11, provided the first antlerless deer is checked before pursuing or taking the second. Hunters should refer to the 2004-2005 Hunting and Trapping Regulations summary for details. Hunters should note only 1 antlerless deer can be taken during antlerless season on public land in Pendleton County, with the season only for six days (Dec. 6-11)</p> <p>Hunters should also be aware that the Wilson Cove Deer Study Area in Hardy County will not be open to bucks-only firearms seasons. As in past years, the area will have a bucks-only muzzleloader season November 22 – December 4. Details are in the 2004-2005 Hunting and Trapping summary.</p> <p>The best outlook for deer hunting comes from Hampshire.</p>
Turkey	<p>The majority of field personnel are forecasting fall harvests to be higher than last year. Brood reports are currently running 20% higher than 2003, and many surveyors are seeing some fairly good-sized flocks. Like deer, turkeys will probably be feeding in oak stands.</p> <p>All counties have “best” surveys, except Pendleton whose brood counts are down this year.</p>
Bobwhite Quail	<p>Surveyors report similar to declining bobwhite populations in the Eastern Panhandle. Another wet year along with increasing human development in this area certainly isn’t helping quail.</p> <p>No counties submitted what we considered a “best” survey.</p>
Black Bear	<p>Numbers and harvests of bruins are predicted to be similar to slightly higher than 2003. The archery kill may be down due to widespread acorn crops; the gun harvest should be higher, weather depending, because of late denning.</p> <p>Best surveys come from the Eastern Panhandle counties (Hampshire and Hardy).</p>

## ECOLOGICAL REGION 2

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

<b>Game Species</b>	<b>2004 Outlook</b>
Gray and Fox Squirrels	<p>Several cooperators noted that bushytails are already heavily cutting hickory. Most will be cut out by season start. Squirrels will then be switching to the oaks – white oaks produced at all elevations. Most mature red oak acorns were observed at elevations above 3000 feet. Scouting for white oaks where cutting is occurring and finding any pockets of hickory still with nuts will pay off for hunters desiring to fill their bag. Most all counties predict better hunting than in 2003.</p> <p>The most promising reports are from Pocahontas and Randolph counties, and from the oak-hickory section of Greenbrier County.</p>
Rabbits	<p>Like last year, surveyor reports show cottontail numbers to be similar to higher. Abundant rainfall throughout the year, particularly those early September rains, has produced good cover conditions. Hunting should be better.</p> <p>Best reports come from Greenbrier and Randolph counties.</p>
Ruffed Grouse	<p>Encouraging news for Ruff hunters – broods are up 65% from 2003; this is the only region where brood counts are significantly higher. Hunters should note that their bird dogs may be more excited around producing grape tangles, which “hit” abundantly in certain locales, in thornapple and crabapple clumps at all elevations, and in thickets adjacent to white oaks.</p> <p>Pocahontas and Webster counties have the best surveys.</p>
Raccoon	<p>Ringtail numbers are similar to 2003 through most of this region. However, good acorn and berry crops at all elevations will have masked bandits scattered.</p> <p>Randolph is the best survey county.</p>

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

Game Species	2004 Outlook
Deer	<p>Hunting and harvests should be similar to 2003. Widespread white oak acorns, and scattered thornapple and crabapple fruits will have deer dispersed. Field people noted deer feeding heavily on apples where they produced, but are seeing fewer deer in fields as they switch to acorns.</p> <p>Like last year, the antlerless season is only 6 days (Dec.6-11) on <u>public</u> land with a limit of 1; the muzzleloading season limit on public land is also only one. Those who hunt Randolph and Tucker counties should note that the antlerless season will be open again during the buck firearms season with a limit of one. Those hunting Webster County be aware that antlerless hunting is limited to West Virginia residents only and prior application for permit is required (except resident landowners hunting on their own land). Please refer to the 2004-2005 Hunting and Trapping Regulations summary for details.</p> <p>The best survey comes from Pocahontas County.</p>
Turkey	<p>We reported that grouse broods were up 65% from last year in this region – the only region significantly higher. Astoundingly this is the only region in the State where turkey broods are down (27% so far) – this makes 3 years in a row for declining productivity in this region. Birds will also be widely scattered because of dispersed acorn and soft mast crops. Consequently, we are predicting lower harvests for the Mountain counties.</p> <p>Pocahontas County has the most promising reports.</p>
Black Bear	<p>This is a tough one to call! Cooperator forecasts are about 50/50 for a similar or higher kill. Based on adequate and dispersed wild foods, we predict the bow harvest should be lower, and the gun kill a bit higher – since foods should keep bears out longer. Overall harvests should be similar or slightly higher. The big glitch – if an “early” winter of snow and cold puts bears in the dens prematurely. The kill will then be lower.</p> <p>Best surveys come from two of the best traditional bear hunting counties – Greenbrier and Randolph</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	2004 Outlook
Gray and Fox Squirrels	<p>Slightly better hunting is forecasted for most counties in these southerly regions. Walnuts and beech are a bust, but there may be enough hickory to still have bushytails working some patches the first few weeks of season. White oak acorns hit well, but some areas report it as spotty – many locales report it produced better at higher elevations. Proper scouting <u>just</u> prior to season is advised. Hunting should be fun, but some days it will be challenging to get six.</p> <p>Best surveys are from Region 3 counties: Boone, Logan, Mercer, Monroe, Summers, and Wyoming.</p>
Rabbits	<p>Ideal cover conditions exist due to adequate rains. Most cooperators predict similar to better hunting throughout these two regions.</p> <p>However, counties with best reports are mainly in the New River area – Fayette, Mercer, Raleigh, and Summers.</p>
Ruffed Grouse	<p>Brood reports for both these regions are in the same category as last year – <u>scarce</u>. Rains in May and early June probably caused poor chick survival. Hunting should be similar to 2003 – lousy!</p> <p>Most encouraging surveys come from Kanawha, Mercer, Raleigh, and Summers counties.</p>
Raccoon	<p>Like 2003, most surveys indicate higher masked bandit numbers, and are forecasting better hunting. However, ‘coons will be highly scattered as most foods that produced are widely dispersed.</p> <p>All “best” surveys come from the most southerly counties of McDowell, Mercer, Mingo, Monroe, Raleigh, Summers, and Wyoming.</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.

<b>Game Species</b>	<b>2004 Outlook</b>
Deer	<p>Field personnel from most counties in these regions feel overall deer kill will be up. Many think the archery harvest will be down (deer will be widely dispersed in oak forests). However, an expected higher buck harvests may compensate for the drop in bow kill, with resultant total kill in these regions similar to 2003. Hunters should review the 2004-2005 Hunting and Trapping Regulations summary for details on various seasons in different counties. Only archery hunting is allowed in Logan, McDowell, Mingo, and Wyoming counties. Some portions of Clay, Fayette, and Kanawha are closed for antlerless hunting while some areas of these counties are open.</p> <p>Hunting regulations designed to lower over-populations of deer in Monroe County may be working; this is about the only county that didn't qualify for a "best" survey status.</p>
Turkey	<p>Brood counts are currently ahead 16% from 2003. About all cooperators are seeing more turkeys. No counties qualified for a fall season because of low spring gobbler harvests. However, the traditional 4-week season will occur in Nicholas and Monroe counties, where surveyors are predicting similar harvests to last year.</p>
Bobwhite Quail	<p>Declining to stable numbers are reported in these regions.</p> <p>The only positive reports are from Cabell and Lincoln counties.</p>
Black Bear	<p>Another good bruin harvest should occur, particularly in counties with firearms seasons. Because of widely scattered acorn crops, cooperators feel the archery kill will be down. Hunters should note that Nicholas County has been dropped from those counties allowing an early November (Nov. 1-6) season with dogs and a season without dogs during the bucks firearms season (Nov. 22-27). The counties still having these special firearms opportunities are Boone, Fayette, Kanawha, and Raleigh. Several counties have been added to the December (Dec. 6-11) gun season without dogs – please refer to the 2004-2005 Hunting and Trapping Regs. for details.</p>
Wild Boar	<p>As forecasted last year, the elimination of the December firearms season significantly reduced harvest (only 5 wild boar were killed total). The take should also be low for 2004, as managers attempt to increase hog populations in the area centered around Boone and Logan counties.</p>

## ECOLOGICAL REGION 4

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

<b>Game Species</b>	<b>2004 Outlook</b>
Gray and Fox Squirrels	<p>Survey participants are seeing a few more squirrels than last year, and think hunting will be improved. Mast appears more spotty in this region, with white oak the better producer. Cooperators are seeing more acorns, both white and red oak, on ridges. Hickory is very spotty and may be cut out by season start. Hunters will probably have to cover some ground in order to provide adequate meat for the gravy.</p> <p>Braxton, Lewis, and Upshur are best reporting counties.</p>
Rabbits	<p>Similar to better cottontail hunting is forecasted. September rains should keep cover lush and offer protection to November. Beagles and their followers should have some merry good chases.</p> <p>Best surveys are from Braxton and Lewis counties.</p>
Ruffed Grouse	<p>Although most field personnel predict similar (as in “terrible”) hunting for 2004, about one-fourth of the reports indicated hunting would be better! Brood counts are up in some counties. Reports on grape are that they are either very loaded or nothing at all. Find those producing vines and you will make your pointer or flusher a very excited and happy dog!</p> <p>Positive reports were received from Barbour, Marion, Taylor, and Upshur counties.</p>
Raccoon	<p>‘Coon hunting should be similar to slightly better than 2003. However, since mast is spotty, ringtails will be widely scattered – although better luck on strikes with ‘Ol Blue may be along the ridges rather than in the hollows.</p> <p>Counties with the better surveys are Barbour, Lewis, and Upshur.</p>

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

<b>Game Species</b>	<b>2004 Outlook</b>
Deer	<p>Slightly higher total whitetail harvests should occur in this region, according to the collective opinion of survey participants. The fair production of white oak and its reported spotty distribution will have deer dispersed and away from fields. There are still plenty of deer to maintain a high bow kill, though, and increased buck and antlerless kills will mean a good harvest in this area.</p> <p>All counties in this region are open for antlerless hunting with a bag limit of 4 on private land (using a combination of Class N and NN and unfilled RG or RRG licenses). However, Preston County (west of Cheat River) has a bag limit of only one. Details for whitetail hunting can be found in the 2004-2005 Hunting and Trapping Regulations Summary.</p> <p>The “best” reports come from Lewis and Upshur counties.</p>
Turkey	<p><u>No</u> counties qualified for the one week (Oct. 23-30) fall season. Preston County has its traditional two-week season (Oct. 23-Nov. 6) with cooperators in that county evenly split that the kill will be better or similar to 2003. Surveyors in other counties of this area are seeing more birds than last year, and brood counts for this area are up 74% from 2003. This means that some counties may qualify for the 2005 fall season, and some will probably qualify in 2006 because gobbling 2-year old birds should increase the spring harvest.</p>
Black Bear	<p>Bear numbers continue to increase as bruins expand their range. Most surveys report more bear sightings and sign. Like last year, Lewis, Marion, Monongalia, Upshur, and the western portion of Barbour county have a one-week (Dec. 6-11) gun season without dogs.</p>

## ECOLOGICAL REGION 5

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

<b>Game Species</b>	<b>2004 Outlook</b>
Gray and Fox Squirrels	<p>Because of slightly higher squirrel numbers with poor and spotty oak and hickory foods concentrating squirrels, field personnel predict better hunting in this region. All hard mast produced less than last year, but many surveyors reported hickory hit better on ridges. It will probably be gone by the time hunters journey forth. Bushytails may be found in some atypical places – grape clumps, thornapple and crabapple thickets at higher elevations. Those nimrods finding trees still holding acorns and hickory nuts should have a field day. A limit could be had in a small stand of such trees.</p> <p>Counties with better surveys include Gilmer, Marshall, Ohio, Ritchie, Wetzel, and Wood.</p>
Rabbits	<p>Cottontail numbers are about the same or slightly higher than 2003, with slightly better harvests predicted.</p> <p>Ritchie, Gilmer, Ohio, and Marshall counties have the best reports.</p>
Ruffed Grouse	<p>Almost all cooperators think hunting will be similar to last year (when the prediction was for <u>poor</u> hunting). Lack of high-stem density and early forest habitat combined with another wet spring will again result in dismally low flushing rates in most areas of this region. Hunters should note hawthorn hit better high and grape production in many areas is good.</p> <p>The only positive reports are from Tyler and Ohio counties.</p>
Raccoon	<p>Similar to slight improvements in hunting are forecasted for most counties in this region. ‘Coon chasers should note that black cherry produced better this year and some grape clumps hit well.</p> <p>Best surveys come from Gilmer, Ritchie, Roane, and Wood counties.</p>

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

<b>Game Species</b>	<b>2004 Outlook</b>
Deer	<p>Because of insufficient wild foods, deer will again be using fields heavily. This should result in slightly higher archery and firearms kills than 2003. Most survey cooperators agree, predicting similar to better overall harvests.</p> <p>All counties have liberalized hunting seasons, including antlerless, where a maximum of 4 can be taken on private lands. Hunters should check the 2004-2005 Hunting and Trapping Regulations Summary for specifics on various seasons in particular counties.</p> <p>Surveyors in Gilmer and Wood counties turned in the best reports.</p>
Turkey	<p>Brood reports are up significantly in this region. Poor food conditions will have birds concentrated wherever it is available – a grape chump with fruits, a white oak with acorns, or thornapples, which hit better on the ridges. Birds may also be utilizing fields more in this area because of low mast supplies. The only counties qualifying and open for fall hunting (Oct. 23-30) are in the Northern Panhandle (Hancock, Brooke, Ohio, Marshall). Though there are fewer counties qualified for a season, the kill should be good because of more turkeys and concentrated food conditions.</p>
Black Bear	<p>Bruin numbers continue to expand. Proper scouting should result in a few more bears being harvested by bowhunters. Early season archery enthusiasts should look for feeding activity around apple and white oak trees. Late season hunters will find sparse bear sign -- bruins should den early in this region because of low food supplies.</p>



## **APPENDIX**

**2004 Mast Survey Field Notes**  
**2004 Hunting Outlook Field Notes**



## 2004 MAST SURVEY FIELD NOTES

COUNTY	COMMENTS
Berkeley	<p>Mast is spotty in some areas. Hunters need to scout hunting areas. Look for White Oak stands.</p> <p>Spotty conditions.</p> <p>Mast is not much this year, although seems to be good hickory and grape crop low.</p> <p>Mast very poor in high elevations.</p>
Barbour	<p>Even saw a relative small chestnut oak (6") with acorns. Hickory nuts very scattered – Hit good or bust!</p> <p>Did find a few scattered red oak with mast. White oak a bumper crop here, hickory mast more scattered up high than in the low country.</p> <p>Blackberries were ‘common’ 3 weeks prior to this survey.</p> <p>Blackberries peaked approx. 3 weeks prior to this survey, but were common at that time.</p>
Boone	<p>Overall mast situation not nearly as good as western part of county. Some White oak loaded; others defoliated and without mast</p> <p>Hallelujah for return of White oak mast which appears to be bumper. Same for grapes, elberry, and redbud, saw road-killed rattlesnakes too.</p> <p>Mast is better high than low.</p>
Braxton	<p>Red oak better than higher elevation. White oak not as good. Grapes as good as last year.</p> <p>White oak is by far the best mast. Should hunt W.O. patches.</p> <p>Black bear abundant in area.</p> <p>Good grouse population in huckleberry.</p>

COUNTY	COMMENTS
Calhoun	Pretty dismal survey.
Brooke	<p>Cherry appears to be most abundant mast followed by pockets for white oak, which are few and far between.</p> <p>Cherry is most abundant mast followed by white oak. Not much variation between high and low elevation.</p>
Clay	<p>Soft mast pretty good. But hard mast is hard to come by in all parts of Clay, lower Braxton &amp; parts of Roane &amp; Kanawha counties I have looked at.</p> <p>Whit oak falling.</p> <p>Seen several walnut trees with mast, pignut hickory and mockernut had mast, oaks scarce.</p> <p>Chestnut oak only hard mast seen – common. Soft mast good.</p> <p>Soft mast common. Hard mast scarce – some walnut and some chestnut oak.</p>
Cabell	<p>Big oaks did well. Hunting prospects look better than last year.</p> <p>Big white &amp; red oaks did well. Hickories are very patchy.</p>
Fayette	<p>Oak is patchy but trees that did hit are loaded. Apple, walnuts also seem to be patchy.</p> <p>Once again oak seems to be patchy but trees that hit are loaded.</p> <p>The larger sassafras trees have fruit. There are a few red oaks that have a small number of acorns</p> <p>The grape vines that had grapes were loaded, but many vines had no grapes.</p> <p>Many of the red oaks had some acorns, but they were sparse and scattered throughout the crowns of the trees.</p> <p>Oak mast scattered.</p>

COUNTY	COMMENTS
Gilmer	<p>Oak leaves are turning brown something eating on them (about all the White Oaks).</p> <p>Severe oak defoliation – 3<sup>rd</sup> year in a row. Noticed some white oak mortality</p> <p>.</p>
Grant	<p>Outstanding soft mast production (cherry, apple, hawthorne).</p> <p>Red oak is the only hard mast tree that produced consistently. White oak mast is very sparse. Black cherry and fire cherry both did well.</p> <p>White oak production sparse, walnuts production at this location is sparse, but is abundant elsewhere in Maysville.</p>
Greenbrier	<p>Autumn olive abundant.</p> <p>Barring drought or loopers, red oak should be good in 2005.</p> <p>Spotty!</p> <p>Hickory scattered in patches Blueberry – scarce.</p>
Hampshire	<p>Scrub oak is most abundant but still poor. Some white oak but not a lot.</p> <p>Some oak at scattered locations. Scrub oak is the most common mast. Didn't see much of anything else. One of 10-12 grapes vines had fruit. A few sassafrass but bear had already hit them.</p>
Hancock	<p>Hawthorn and apple appear to be most abundant food source followed by white and chestnut oak, which finally produced some mast this year.</p> <p>Not much variation between high and low elevation with hawthorn and apple most common followed by while and chestnut oak.</p>

COUNTY	COMMENTS
Hardy	<p>White oak acorns seen are of poor quality. Mockernut Hickories – no nuts.</p> <p>Only some apple trees have fruit. Cherry has matured and is gone.</p> <p>Minor locust damage but less than on east and wet slopes. Scattered black oak mast but not enough to call common.</p> <p>Some hickory on ridgetops but little on slopes moderate locust damage on tops of branches.</p> <p>Some locust damage on tips of branches.</p> <p>Squirrels are cutting hard on the few hickories we have. Don't waste your time in hickory woodlots this year. Follow the white oaks.</p> <p>I think every white oak in this country has nuts on it. But you are more likely to see an abagoochie than a walnut this year.</p> <p>Red oak mast very spotty but abundant on some trees.</p> <p>Only saw one chestnut oak. This is one of two areas in Hardy that has beech.</p>
Jackson	Best White oak in several years.
Jefferson	<p>Red oak is spotty in this area, smaller acorns than normal.</p> <p>Some red oaks produced but too spotty to call abundant. Occasional hickory produced.</p> <p>Poor chestnut oak production. Almost all chestnut oak has caterpillar damage.</p> <p>Poor walnut production. Chestnut oaks have no mast showing signs of caterpillar damage.</p> <p>Walnut production very poor despite abundance of trees.</p> <p>Large hickories that escaped serious locust damage have good mast production.</p>

COUNTY	COMMENTS
Kanawha	<p>Not very heavy.</p> <p>Very spotty.</p> <p>Chestnut oak and white oak looks good.</p> <p>Better then last year.</p> <p>Better mast conditions – overall than last year.</p>
Lewis	<p>First time at this new location (gas well).</p>
Lincoln	<p>I moved to the area 8/23, so species that fruit early in the year I have no data on.</p> <p>I moved to the area 8/23. I have no data on species that fruit early in the year.</p>
Logan	<p>White oak acorns were abundant – some trees were loaded. Most white oak had at least some acorns.</p> <p>White oak acorns abundant – found some black/red oak with acorns.</p>
Marion	<p>White oak in more open grown areas around park have abundant acorns. Other oaks, a few trees had scattered acorns. Only saw a few hickory – few nuts.</p>
Mercer	<p>Black oak was seen but not red oak mast seen.</p> <p>White oak is widespread with some trees heavily loaded with acorns. However, most trees have a moderate number of acorns. Red oak is non-existent.</p> <p>Oaks of all species are scarce, white oak are the only acorns available, and they are few and far between. Crabapple, apple and hawthorn look good, and most of the grape vines in the area had grapes</p> <p>Spotty.</p> <p>Mast is patchy. We had a late freeze in this area.</p>

COUNTY	COMMENTS
Mercer	<p>Mast is patchy. Some areas have mast, some have none.</p> <p>The late frost seems to have hurt the hollows as far as producing mast.</p> <p>The ridge tops have better mast this year than the hollows do.</p>
Mineral	<p>Some red, scarlet and chestnut oak scattered here and there. No white oak, unlike other areas.</p> <p>Some shagbark hickory produced pretty well.</p> <p>Good shagbark hickory, Elderberry abundant. Not enough dogwood left in this country to judge. White and chestnut oak fairly abundant in places.</p> <p>Red oak very spotty.</p> <p>Surprising amount of white oak acorns. Occasional hickory tree loaded with nuts (shagbark only).</p> <p>Black oak does have mast (common).</p> <p>Overall mast picture – very little red &amp; scarlet oak and chestnut oak mast. Fair amount of white oak mast on branches that received a lot of sun. Shagbark hickory produced fairly well in spots. Soft mast lacking. Surprisingly little yellow-poplar mast.</p>
Monongalia	<p>Had difficulty seeing any oak mast; this area is next to a food plot – the autumn olive and one chestnut tree were abundant.</p> <p>Several scarlet oaks had very large acorns.</p> <p>Apple trees in other areas of Coopers Rock State Forest have abundant apples.</p> <p>I believe it's going to be good year for deer, squirrels, rabbits maybe turkey fall season.</p>

COUNTY	COMMENTS
Monongalia	<p>Good white oak crop for deer and hickory for squirrels.</p> <p>Oak not as good on this survey as expected. I guess that's why we conduct so many surveys statewide!</p> <p>Hickory was great! Just not enough white oak to put abundant.</p>
Monroe	Spotty.
Morgan	<p>Some chestnut oak acorns in tops of some trees.</p> <p>White oak in the tops of some trees.</p> <p>Overall mast picture – very little red &amp; scarlet oak and chestnut oak mast. Fair amount of white oak mast on branches that received a lot of sun. Shagbark hickory produced fairly well in spots. Soft mast lacking. Surprisingly little yellow poplar mast.</p>
Nicholas	<p>Chestnut acorns falling – seems to be to early.</p> <p>Some of the beech trees have a good crop of nuts many have nothing – tree health.</p> <p>James, this area looks very bad. I am sure other areas of this state have more mast squirrels.</p> <p>White, red oak, and hickory is falling pretty bad..</p>
Pendleton	<p>Found some red oak and scarlet oak up high.</p> <p>Found a few scattered black oak but no red oak acorns. Found hickory better on low ridges than low in hollows.</p> <p>Some Black cherry, but not abundant.</p> <p>Excellent bloom on Black Cherry but no fruit.</p> <p>May well be one of the better white oak years.</p> <p>Beech in scattered pockets. Oaks – all trees appear to have a fair amount of acorns – not abundant, but well distributed.</p>

COUNTY	COMMENTS
Pocahontas	<p>Mt. Ash common at higher elevations. Some beech trees have a good crop of nuts, many have nothing.</p> <p>Good soft mast.</p> <p>Good white oak crop.</p> <p>Some oak, cherry, beech, hickory, and white oak toward east scenic highway - mountain ash between Little and Big spruce Overlook.</p> <p>Some beech and cherry.</p> <p>There are some cherries out here and some trees are loaded, but very spotty. Some hickory but spotty. Good oak crop, but not great!</p> <p>Some Red/Black oak and scarlet oak but very spotty.</p> <p>Hard and soft mast common to abundant almost everywhere – at least most places I’ve been.</p>
Preston	<p>Hickory mast found to be somewhat spotty, although hickory mast found prevalent in most locations to warrant a common rating.</p> <p>Black cherry – very spotty, trees with fruit have little. Oaks – somewhat spotty.</p> <p>Hickories – spotty, basswood – scarce.</p> <p>Hickories somewhat spotty, cherries spotty – some trees with fair amount of fruit others with none. White oak – somewhat spotty, sumac - common, and elderberry – common.</p> <p>Rose – common, sumac – common.</p>
Putnam	Soft mast – good, oak species better this year.

COUNTY	COMMENTS
Raleigh	<p>Most of the oaks I saw had acorns, just not very many.</p> <p>Biggest white and chestnut oak acorns I have ever seen.</p> <p>Late cold snap killed all my chestnuts back - not a single nut on 8 trees.</p>
Randolph	<p>Cherry common to abundant on some trees. Signs of the fungus, black rot.</p> <p>In Northern Randolph County white oak is good; Hickory spotty, but good where located, Beech spotty to scarce to scarce. All the soft fruits (Apple, Blackberry, Black Cherry, etc) are good. Red and Black Oak appear to be on ridges.</p> <p>Excellent mast and fruit crops at this location.</p> <p>Although there was no cherry at this location, there is some spotty cherry locations, especially located on a northern/western aspect where they are locally common.</p> <p>Oak and hickory mast is excellent at this location.</p> <p>Apple late abundant early scarce.</p> <p>Mast common overall but some species – hickory – very spotty.</p> <p>Not as good as the lower elevation but still relatively common overall--there is something everywhere but no spots with great abundance. Mast producing age class continues to decline on this mountain.</p> <p>Black walnuts were scarce to common above 3,000 ft. not a normal year.</p> <p>Beech is common to scarce</p>

COUNTY	COMMENTS
Ritchie	<p>Very poor, worst than the ridges.</p> <p>Many oaks with acorns but only a handful/tree.</p> <p>Partial oak defoliation common at low elevation.</p> <p>Found some scattered chestnut oak on ridgetop but not enough to be common.</p> <p>Very disappointing – lowest production since I moved here in 2000.</p> <p>Blackberries were good; elderberries had bumper crop, but most of that has already be consumed by birds.</p>
Roane	<p>No Persimmon's. Autumn olive abundant.</p> <p>Autumn olive- abundant. No Persimmons.</p> <p>Insect defoliation on white oaks common.</p> <p>White oak and hickory probably would have been more abundant if not for wind damage of trees and insect defoliation of white oaks.</p>
Summers	<p>There were some species of grapes that hit this year and their vines were loaded. However most of the vines I looked at had no grapes on them. A few scattered red oaks had a few acorns, but most trees were bare. Other areas I have been in along the New River have mast conditions similar to what I observed here.</p> <p>White oak looks decent though not as abundant as in some other areas. Red/black oak acorns non-existent.</p> <p>Red oak has been falling for two weeks.</p>

COUNTY	COMMENTS
Taylor	<p>A few oaks with acorns, scattered vines with grapes. Occasional hickory with nuts.</p> <p>Some oaks – especially in open areas, producing abundant acorns.</p> <p>No oak mast at lower elevations, Black cherry and apple – spotty.</p> <p>Walnut, hickory, white oak – spotty. Mast considerably better at higher elevations. White oak acorns – large size.</p>
Tucker	<p>Some red oak called common on individual trees. Hickory and Red Oak “spotty”! White Ash – common.</p> <p>Although not seen in this area, soft mast is locally abundant in some areas of Tucker County. Sassafras, apple, blackberry, crabapple, and white oak, production common in other areas also.</p> <p>Some of the oaks at higher elevation have leaf damage from insects. Fewer species present due to northern hardwood forest type and elevation.</p>
Tyler	Late frost.
Upshur	Taken at my camp in Upshur. I spend more time in the forest there than in Fayette.
Wayne	<p>Big mature white and red oaks did well.</p> <p>Big oak trees did well, while others did poor. Hunting should be good around very large oaks.</p>

COUNTY	COMMENTS
Webster	<p>Domestic grapes (concord) did well this year. I saw one red oak which had several acorns.</p> <p>I saw one black oak that had several acorns.</p> <p>Could not determine abundance of yellow-poplar.</p> <p>Saw several yellow-poplars; but could not determine abundance.</p>
Wetzel	<p>Very few walnuts or apples.</p>
Wirt	<p>Mast “spotty” in some lower areas. Ridgelines and upper slopes look good – nuts full and mature.</p> <p>Hazelnut was scarce, Persimmon–scarce, chinese chestnut – common, honeysuckle – scarce.</p> <p>Saw a little more mast on the ridge top.</p> <p>Hazelnut was common, Persimmon – scarce, chinese chestnut – common to abundant, no white oak found at all.</p> <p>Hazelnut was scarce, Persimmon – scarce, chinese chestnut – common, honeysuckle – scarce.</p> <p>Saw a little more mast on the ridge tops.</p>
Wood	<p>‘Old Woods’ lots of oak in coves and on flats.</p>
Wyoming	<p>White oak hit pretty good – not all trees but about ¼ of them had at least some acorns – a few were loaded.</p> <p>White oak hit pretty good –not all trees but about ¼ of them had acorns.</p> <p>Deer eating chestnut oak acorns as they fall.</p>

## 2004 HUNTING OUTLOOK FIELD NOTES

COUNTY	COMMENTS
Berkeley	<p>I have not seen a grouse this year in my travels. Have seen numerous flocks of young turkeys, 25-30 in a group. Everything else about the same. Seeing a lot of fawns now.</p> <p>Hunters need to scout hunting areas, squirrel numbers are down somewhat; and they will be scattered in the oaks. Hunters need to focus on white oak stands.</p>
Boone	<p>Mast is plentiful, while game populations appear to more abundant than last year. Game will be scattered.</p> <p>Timbering activities have left lots of treetops on ground making travel by foot more difficult.</p> <p>Lots of fawns and big ones at that; lots of bucks in velvet; lots of bear sightings. I am personally not seeing grouse or turkey broods. Lots of road killed raccoons and deer. Some spark of hope for quail too. Average past winter and very good mast is welcomed.</p>
Braxton	<p>In the rolling hills and farm country North of Elk River and East of I-79, the deer herd has declined significantly.</p> <p>South of Elk River, coyote populations are growing every year. In the Little Birch area, I know of eight different bears including one large bear with 7 ½" front paw.</p> <p>Soft mast/hickory crop last year was good enough to help squirrel populations. Turkey reproduction was poor again. Lots of rabbits. Oak mast better this year but still very average. Deer need a good mast year.</p>
Brooke	<p>Hunters should find stands of white oak this year and stay close by. Turkey's appear to be doing better this year.</p>
Clay	<p>Seeing more squirrels than last, but not many more. The berry crop this summer was good so complaints on bear &amp; raccoon was down. But I think the animals are still there. Seeing a good many bucks. I think it will be a pretty good buck season.</p>

COUNTY	COMMENTS
Fayette	<p>Scattered acorns may drop the bow kill for deer.</p> <p>Of the 3 counties I surveyed, Fayette had the best mast conditions at both high and low elevations. Bears have been hitting the cherry for about a month now, and if it lasts until archery season its should be good place to hunt. The white oak acorn crop looks good at high elevations and not quite as good down low. The bear bow harvest should be reduced as well as the fall turkey harvest. The bear gun harvest should be the same or better. If I was going to hunt deer, bear, or turkey, I would hunt high.</p>
Greenbrier	<p>Poor mast and hard winter last year has moved the deer and turkey low in the valley; there will be poor hunting on mountain tops and high ridges.</p> <p>Heavy white oak acorns should keep bears from denning early – higher gun kill, lower bow kill.</p>
Hampshire	<p>Had better reports of turkey broods than last year and more bear sightings. I do have a picture of a grouse for future reference.</p>
Hancock	<p>Seen more turkey and ruffed gourse broods this year than past years. Deer are abundant as always and should be concentrated near white oak stands when mast drops.</p>
Hardy	<p>Young turkeys are everywhere, deer seem down – bear at highest populations ever in this county. Summer rabbit numbers higher than usual.</p> <p>Some exceptional turkey poult survival. Sightings of bear more than ever past highs.</p>
Kanawha	<p>Slightly better deer harvest – should see increase in buck/bow harvest. Larger bucks this year –poor deer harvest in Southern Kanawha County is expected. Mast conditions are better this year. However – pre-season scouting will be very helpful.</p>

COUNTY	COMMENTS
Lewis	<p>Mast, fruit is not good; however, more sightings this year.</p> <p>Saw very few turkey poults this spring. Cold wet spring could have something to do with it. Squirrel hunting should be better this fall due to abundant crop of hickory and walnut last year.</p>
Logan	<p>Lots of fawns and big ones at that; lots of bucks in velvet; lots of bear sightings. I am personally not seeing grouse or turkey broods. Lots of road killed raccoons and deer. Some spark of hope here for quail too. Average past winter and very good mast is welcome.</p>
Marion	<p>I have seen more deer than last year, but not as many in years past. Particularly I've noticed more bucks and more fawns. Turkey numbers are about the same, still down from several years ago.</p>
Marshall	<p>Furbearers: Beaver, mink, and muskrat maybe slightly higher this year. I have found two road kill mink in this county this year. This is a first I have seen here.</p>
Mercer	<p>No quail, few grouse.</p> <p>I think deer populations are going to be lower this year because of two years without mast has killed more than usual. But a lower population of deer would be better for the herds.</p> <p>Have not seen many turkey broods. Think it was to wet.</p>
Mineral	<p>Overall mast picture – very little red &amp; scarlet oak and chestnut oak mast. Fair amount white oak mast on branches that received a lot of sun. Shagbark hickory produced fairly well in spots. Soft mast lacking. Surprisingly little yellow poplar mast.</p>
Mingo	<p>Last year's bumper hickories and walnut has helped squirrels recover.</p>

COUNTY	COMMENTS
Monongalia	<p>Lots more bear complaints this year than last year.</p> <p>I hear that bear sighting are increasing in parts of Monongalia County, as well as coyote sightings/problems.</p> <p>Have seen numerous raccoons this summer. Only flushed one grouse on south side of Coopers Rock State Forest in over 20 field days this year.</p>
Monroe	<p>Should be good deer harvest this season.</p> <p>Heavy white oak acorns should keep bears from denning early – higher gun kill, lower bow kill.</p>
Morgan	<p>Overall mast picture – very little red &amp; scarlet oak and chestnut oak mast. Fair amount white oak mast on branches that received a lot of sun. Shagbark hickory produced fairly well in spots. Soft mast lacking. Surprisingly little yellow poplar mast.</p>
Nicholas	<p>Does not look to good for this area; only sighted one turkey this summer. No brood range and fields all grown up.</p>
Pendleton	<p>Anticipate late squirrel hunting to be best. Turkey brood reports lower; abundant white oak mast will cause turkeys to be widespread. Deer – with oak mast, will be widely distributed forest. Unlikely will be may deer encountered in fields. Bear – abundant oak mast may prevent early denning; however, high kill last year may have reduced overall numbers.</p> <p>This year have not heard or seen any turkeys in spring or during summer. Saw one bear with three cubs – seven bears seen this summer.</p>

COUNTY	COMMENTS
Pocahontas	<p>Heavy white oak acorns should keep bears from denning early – higher gun kill, lower bow kill.</p> <p>Hard and soft mast common to abundant almost everywhere. Another cold wet spring – probably hurt grouse broods.</p> <p>Have observed a lot of young grouse this season. Females with six to eight young each time.</p> <p>The deer population seems to be rebounding after the winter kill of 2003. The winter of 2004 wasn't bad and I am seeing a lot more fawns this year. Turkey and grouse looking good, seeing more broods this year.</p> <p>With some beech and cherry and a good white oak crop, wildlife will not have to move too far to find something to eat.</p> <p>Deer hunting will be more difficult due to abundance of mast. Deer will not be concentrated around fields. Bears may den earlier due to abundant of mast.</p>
Putnam	<p>Same abundance of deer – however, expect to see a slight increase in deer harvest (especially during bow and buck season). Decrease in buck harvest last year resulted in more 2 ½ year old bucks (larger racks). Pre-season scouting trips very important.</p>
Preston	<p>Several 8 &amp; 10 ?? bucks. No “basket rack” bucks since harvesting plenty of does the past several years. Much better turkey hatch this year.</p> <p>Have seen numerous raccoons this summer. Only flushed one grouse on south side of Coopers Rock State Forest in over 20 field days this year.</p>
Raleigh	<p>Bears were very concentrated last year on the available food sources, making them easier to find. This year they should be spread out more. Squirrels are trying to follow up from two poor mast years in a row.</p> <p>Scattered acorns may drop the bow kill for deer.</p>

COUNTY	COMMENTS
Randolph	<p>In Northern Randolph County squirrels will be scattered like last year. Rabbits appear to be slightly less, but still will be good. Fawns appear to be healthier than last year.</p> <p>Another bad spring for the turkey and grouse hatch.</p> <p>Bear – bow kill should decline – enough food to reduce effect of illegal baiting. Gun kill should increase – enough food to keep them up into December if weather not too bad. Deer – hard to call, enough food to compete with bait but not enough to reduce movement. Not good fawn production last year so kill will probably be down.</p>
Roane	<p>Due to mast conditions I believe it will be hard on the squirrels and turkeys and deer.</p> <p>Due to poor mast conditions, I expect a decline in squirrels population.</p>
Taylor	<p>Good hickory/walnut crop in 2003, and mid winter should result in good squirrel numbers. Bear populations continue to grow in these northern counties.</p>
Tucker	<p>Due to a better acorn crop this year, the deer hunting should be better around good food sources. Grouse brood reports are higher this year than 2003, but numbers are still low.</p>
Upshur	<p>Survey taken in Upshur instead of Fayette because my camp is in Upshur and I'm in the forest more there.</p>
Webster	<p>I think the squirrel population will be up a little over last year, especially in the latter part of the season. The grouse population seems to be up around my residence. They have been in my blueberries and my plum trees. A hawk caught one in the blueberries last week. The coyote population is still increasing. I hear them from time to time.</p>
Wetzel	<p>Squirrels are abundant this fall. They seem to be cutting hickory early.</p>

COUNTY	COMMENTS
Wirt	Spring rains had greater impact on grouse and rabbits not so much on turkeys. Bear population is due to blossom sometime soon.
Wyoming	Another poor brood production year – makes seven in a row. Turkey and grouse are way down – especially the southern end of Wyoming County.



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