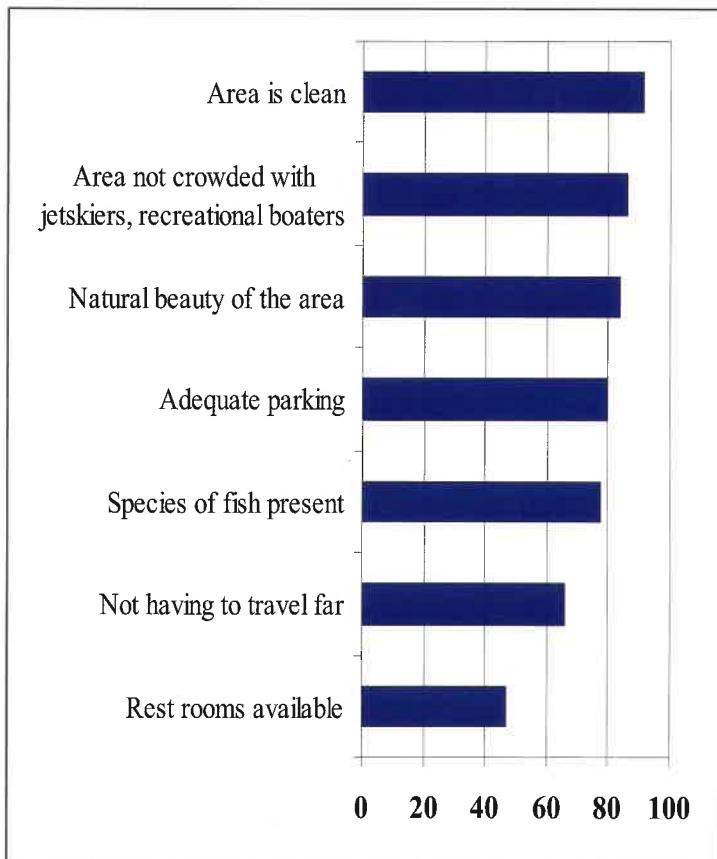


Highlights of Virginia's Survey of Fresh Water Anglers

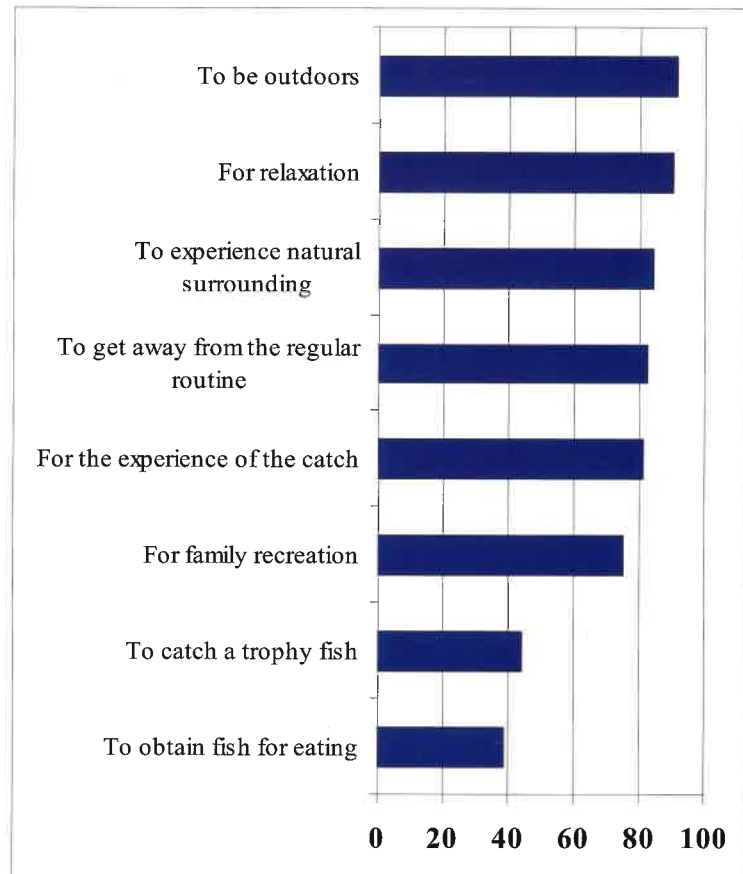
In January 2000, the Virginia Department of Game and Inland Fisheries and Virginia Tech's Department of Fisheries and Wildlife Sciences mailed a survey to over 5,000 resident anglers—a little more than one percent of the state's licensed fresh water anglers. The objective of the survey was to gain a better understanding of the motivations, attitudes and preferences of Virginia anglers. This information will help the Department of Game and Inland Fisheries to manage the state's fisheries to meet the desires of anglers, within the biological constraints of fish populations. More than 2,550 anglers responded to the survey. This report presents a few highlights from the results of the survey.

Why do anglers fish?

The most important reasons why Virginians fish are all related to escaping the demands of everyday life—to be outdoors, for relaxation, to experience natural surroundings. The experience of catching a fish also is important, but catching trophy fish or catching fish to eat are much less important. It is important to note, however, that catching trophy fish or catching fish to eat is important to nearly one-half of Virginia anglers.



Percent of anglers who responded important or very important

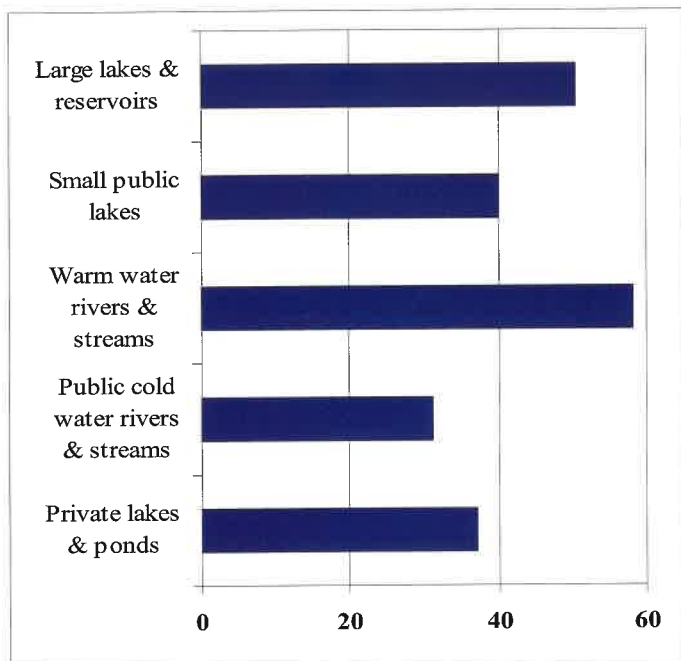


Percent of anglers who responded important or very important

What factors determine where anglers fish?

Anglers seek areas that are clean, litter free and have natural beauty. Avoiding areas that are crowded with jetskiers and other recreational boaters is also very important. The species of fish that are present and distance from home are quite important, while the availability of amenities such as rest rooms and campgrounds are less important.

How and where do Virginia anglers prefer to fish?



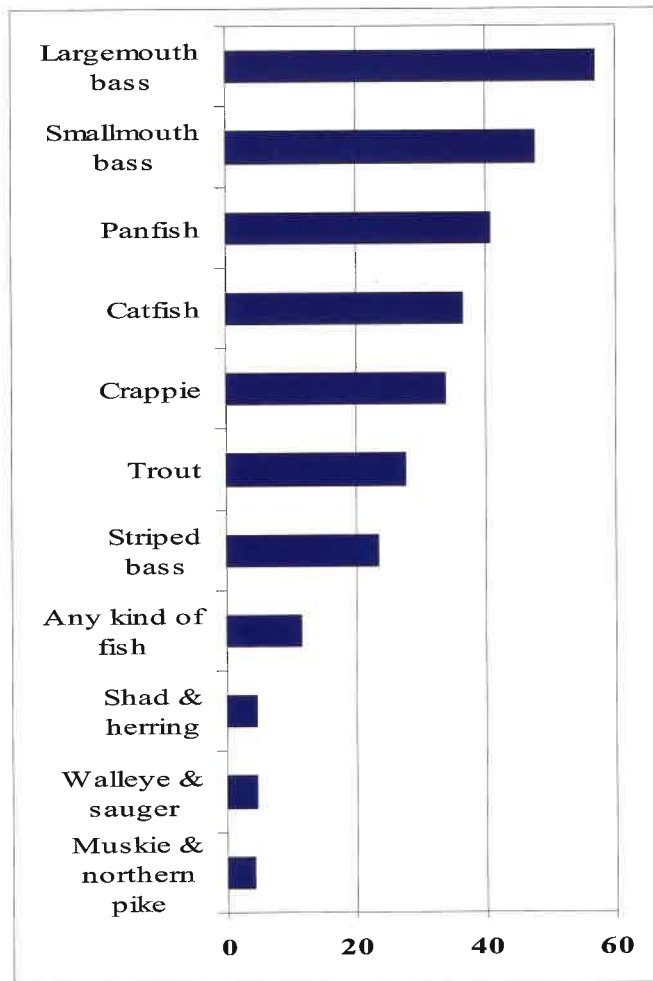
Percent of anglers who fished various types of waters

The state's large reservoirs and major rivers were the most popular places to fish.

Almost 60% of Virginia anglers said they fished warm water rivers like the James and New Rivers, while approximately 50% of anglers said they fished large reservoirs like Smith Mountain Lake.

Largemouth bass and smallmouth bass were the most commonly sought species.

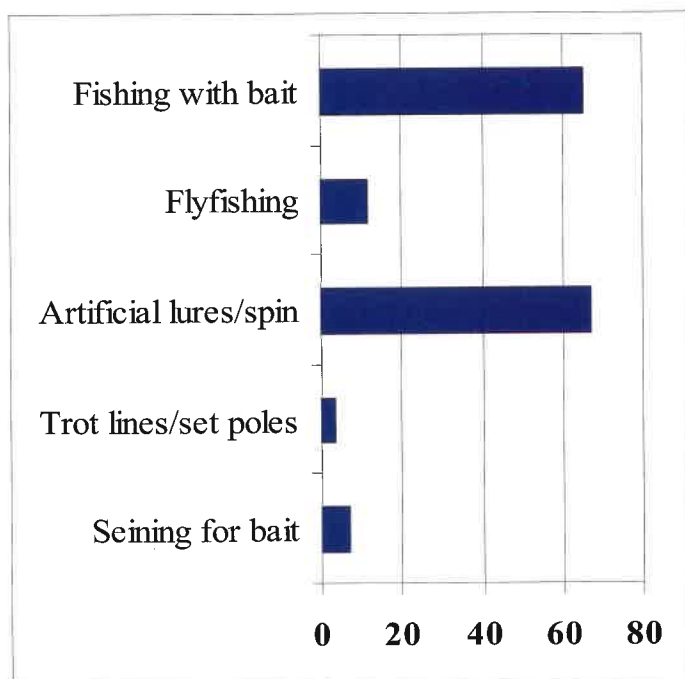
Fifty percent or more of anglers said they preferred to fish for largemouth or smallmouth bass. Panfish, catfish, crappie, trout and striped bass also were popular with anglers.



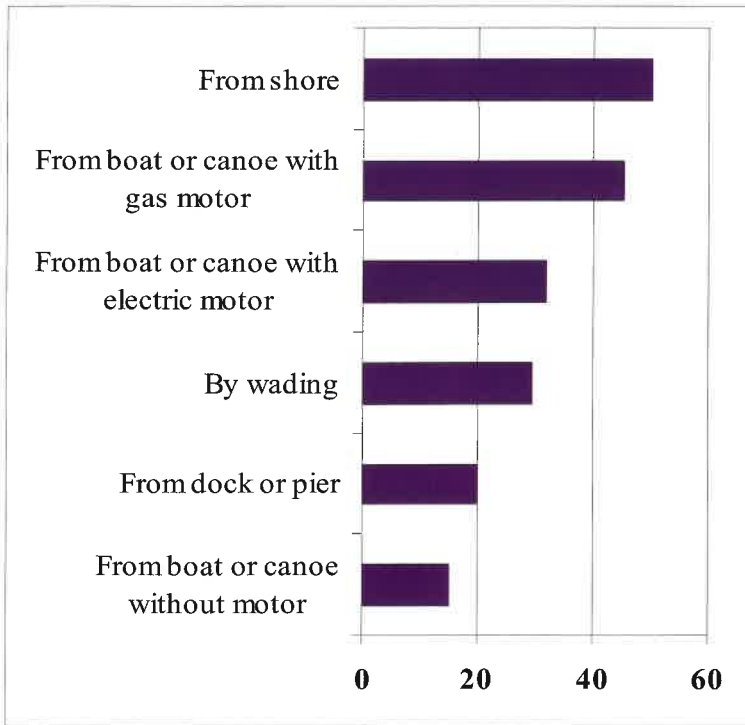
Percent of anglers who fished for...

Artificial lures and bait were the most popular methods of fishing.

Nearly two-thirds of anglers frequently fished with bait or artificial lures, while only about 15% fly fished.



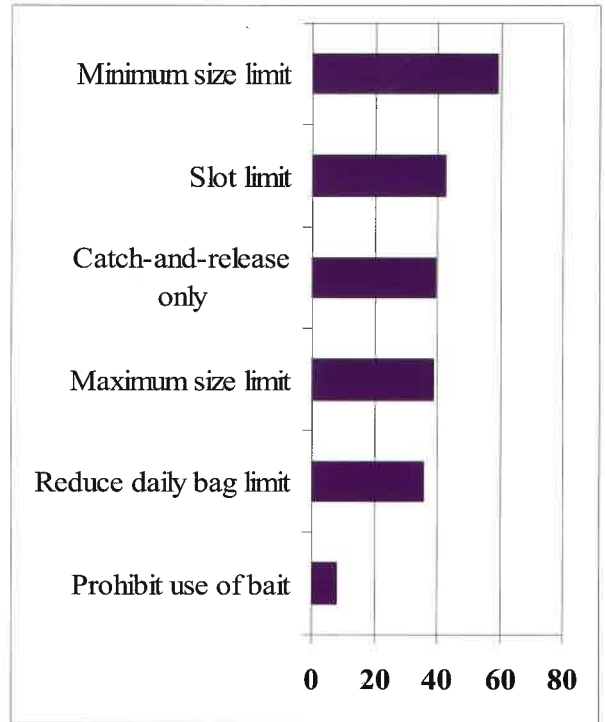
Percent of anglers who used various methods



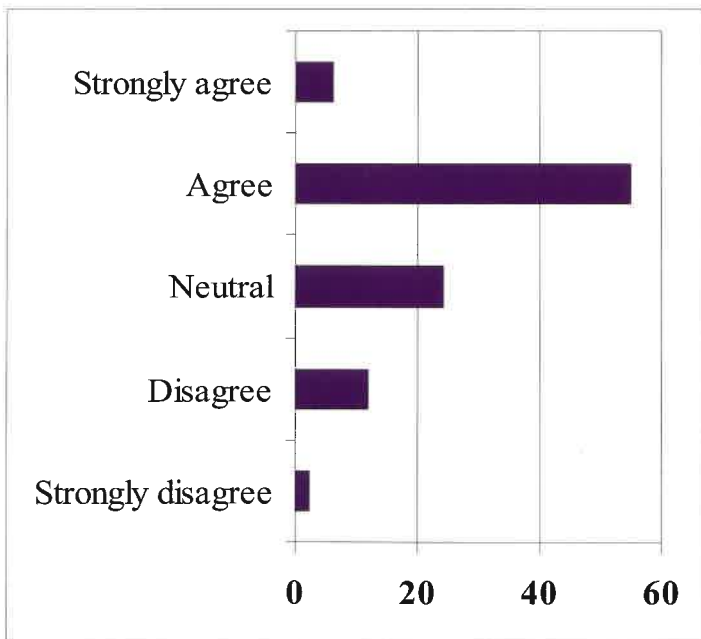
Percent of anglers who fished...

What type of regulations do anglers prefer?

If restrictive regulations are needed to protect a fishery, more Virginia anglers supported a minimum size limit than any other type of regulation. Very few anglers supported prohibiting bait.



Percent of anglers who support each type of regulation



Percent of anglers responding

By what means do anglers fish?

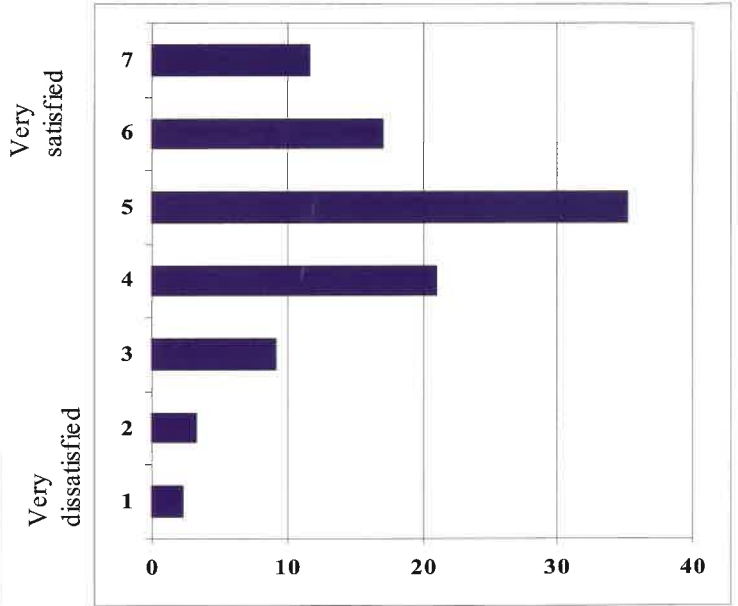
Although fishing from shore is the most common means of fishing, nearly one-half of Virginia anglers fished from boats with motors.

Are Virginia's fishing regulations easy to understand?

More than 60% of anglers agreed with the statement, "Fresh water fishing regulations in Virginia are easy to understand." Only about 15% of anglers disagreed.

Are Virginia anglers satisfied with their fresh water fishing experiences?

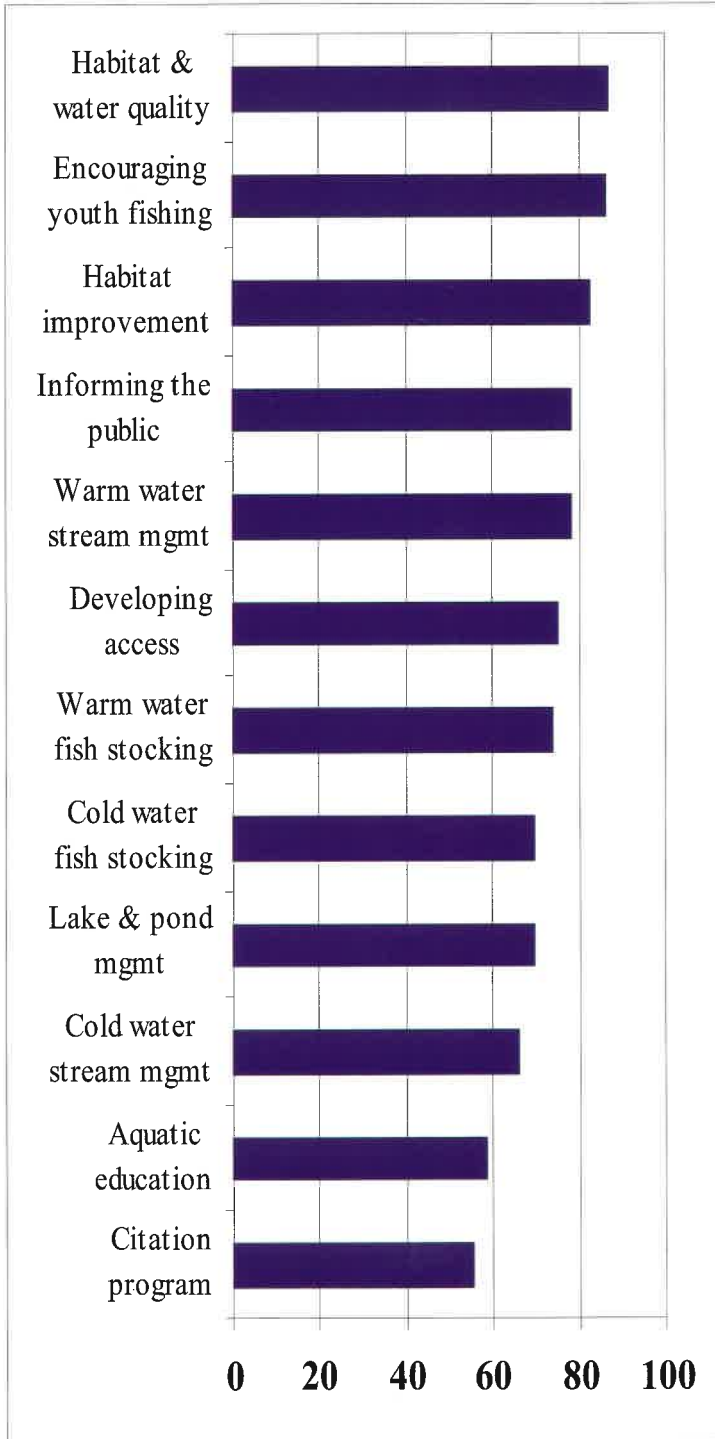
Almost two-thirds of Virginia anglers were at least somewhat satisfied with their fishing experiences. About 15% of anglers were at least somewhat dissatisfied with their fishing experiences.



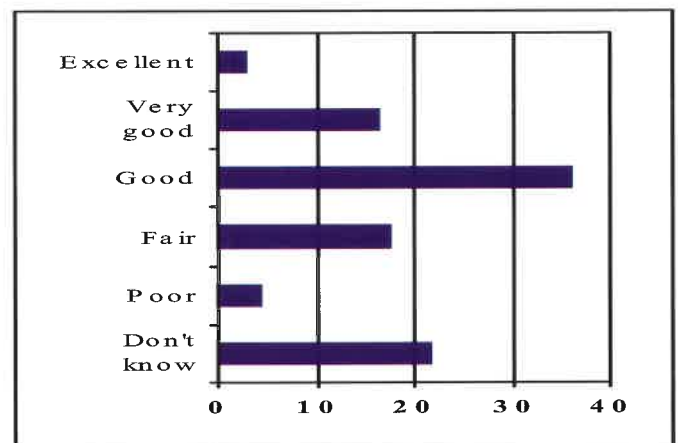
Percent of anglers responding

What are the most important functions of the Fisheries Division?

Nearly all of 16 programs (not all listed here) of the Fisheries Division of the Virginia Department of Game and Inland Fisheries were viewed as important by a majority of Virginia anglers. Protecting habitat and water quality, encouraging fishing among youth and habitat improvement topped the list of important programs. The angler citation program, although near the bottom of the list, was still viewed as important by 56% of survey respondents.



Percent of anglers responding somewhat or very important



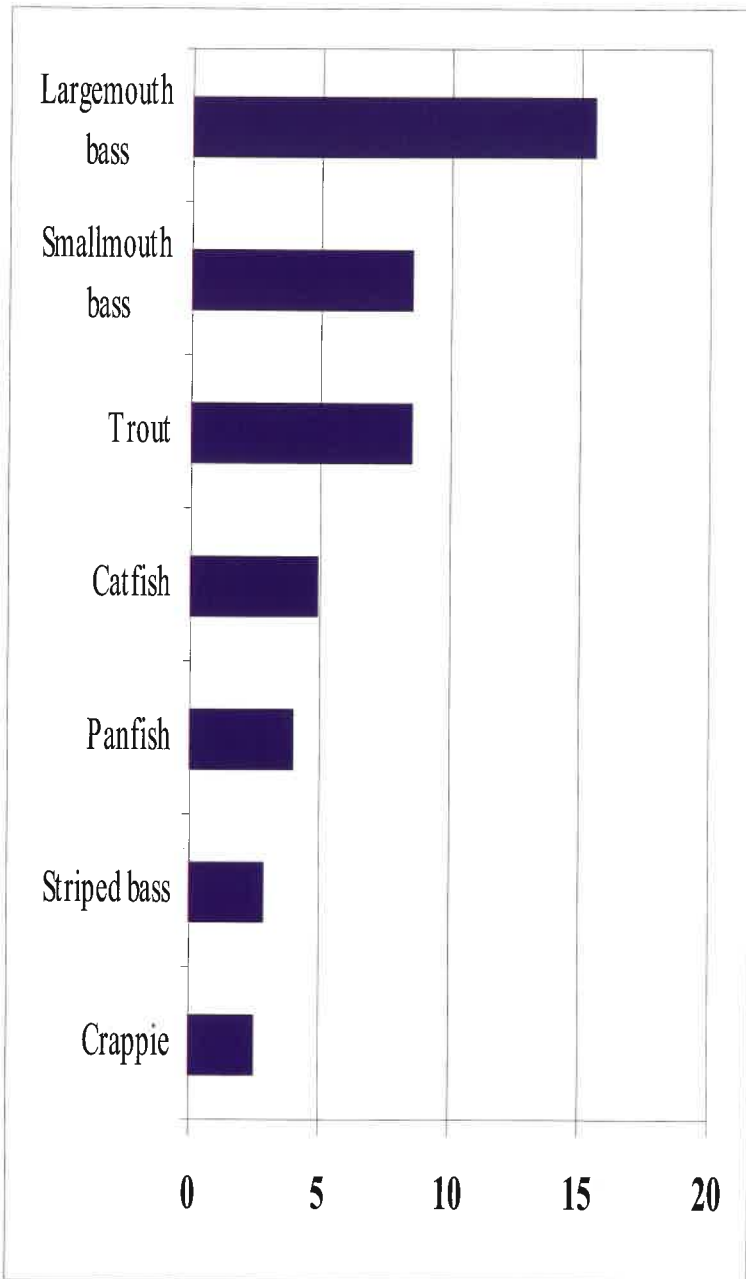
How well is the Fisheries Division performing?

Nearly 56% of anglers rated the Division's performance as good or better, while only 5% rated performance as poor. Twenty-two percent of anglers had no opinion.

Motivations and Satisfaction of Anglers with Different Species Preferences

Many anglers specialize by focusing primarily on one species—

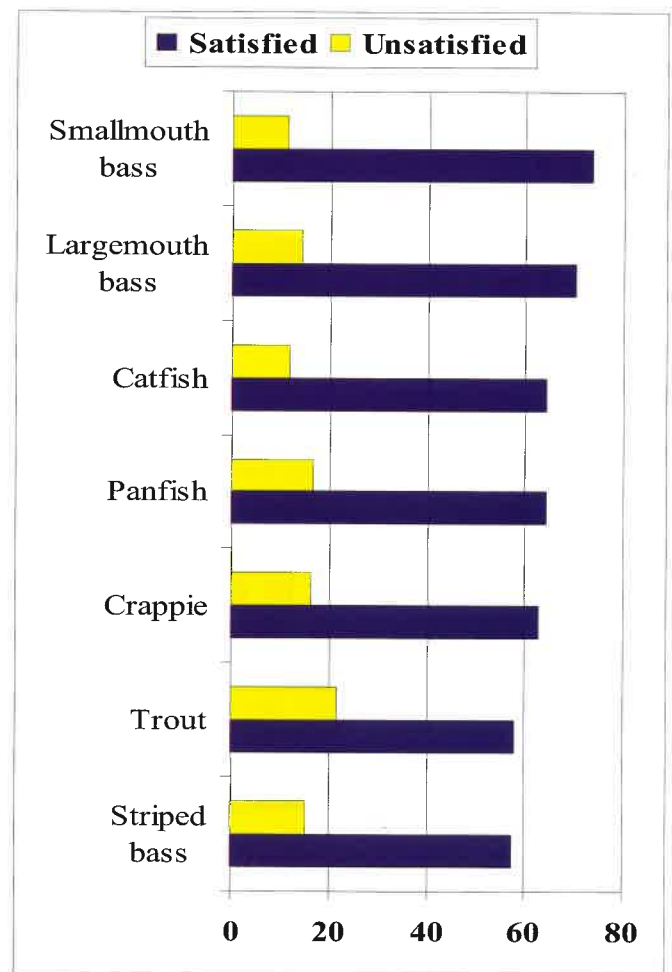
Forty-seven percent of the survey respondents said they spend at least half of their fishing effort in pursuit of one species, with largemouth bass anglers making up 16% of the sample. Fifty-three percent of the survey respondents displayed no clear species preference. Regardless of species preference, anglers indicated that motivations such as "To be outdoors," "For relaxation," and "To experience natural surroundings" were important reasons to fish. Largemouth bass and smallmouth bass anglers placed great importance on catching trophy fish and much less emphasis on catching fish to eat. Catfish, crappie and panfish anglers thought catching fish to eat was quite important, while striped bass anglers tended to want both trophy fish and fish to eat.



Percent of anglers who spent at least 50% effort for one species

How satisfied are anglers with different species preferences?

While a majority of anglers of all major species preferences were at least somewhat satisfied with their fishing experiences, considerably more smallmouth bass and largemouth bass anglers expressed satisfaction than did trout or striped bass anglers.



Percent of anglers expressing satisfaction/dissatisfaction

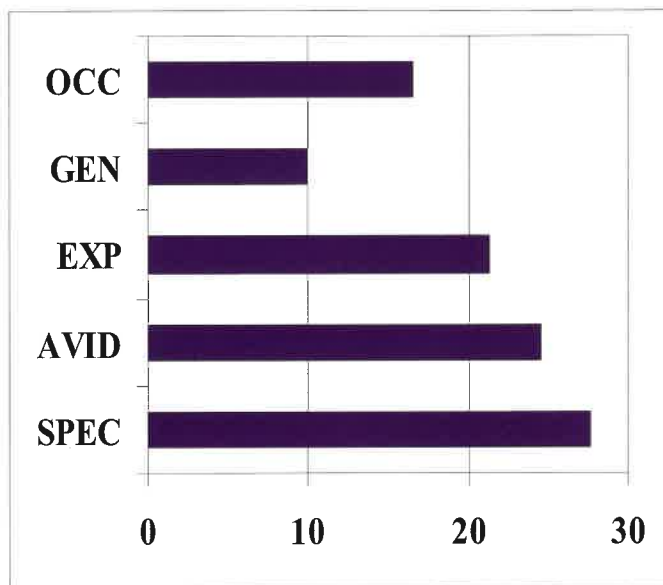
Motivations and Satisfactions of Anglers with Different Levels of Specialization

Another way to classify anglers is to group them by certain characteristics—

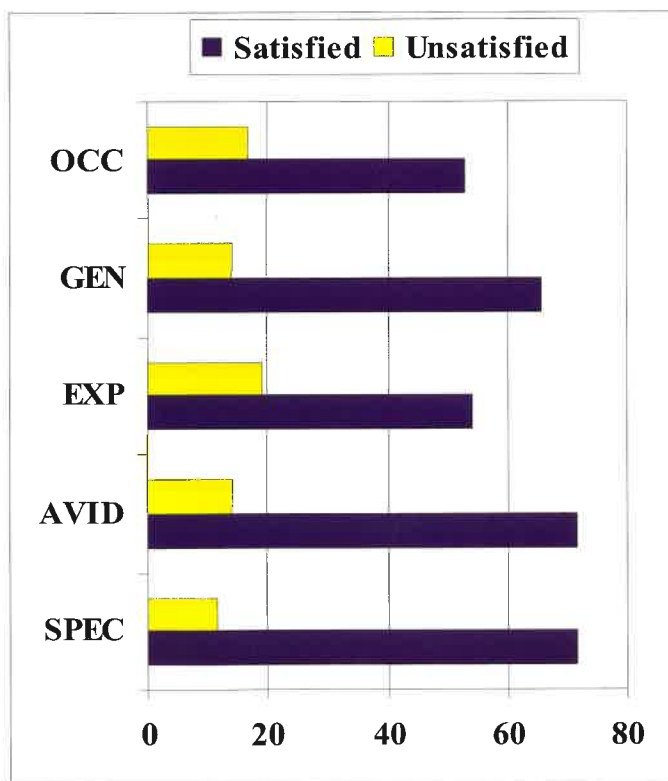
We classified anglers by their fishing experience, level of participation, how much money they have invested in the sport, and how central fishing is to their lives. Virginia anglers fell into 5 groups: Occasional anglers, who tended to be low in all characteristics; Specialists, who were above average in all characteristics; Avid anglers, for whom fishing was the central focus of their lives; Generalists, who tended to be intermediate in all characteristics; and Experienced Generalists, who had many years of experience but low levels of participation.

Slightly more than one-half of anglers responding to the survey fell into the Avid or Specialist angler groups.

Although Avid and Specialist anglers are probably over represented in the sample (because they are more likely to return the survey than other groups), the important point for managers is that each of these 5 groups of anglers seek different experiences when they fish. Anglers of all types indicated that motivations such as "To be outdoors," "For relaxation," "To experience natural surroundings," and "For family recreation" were very important. However, Specialist anglers placed greatest importance on catching trophy fish. Avid anglers and Generalist anglers place more importance on catching trophy fish than Experienced Generalists or Occasional anglers. Obtaining fish to eat was most important to Experienced Generalists and least important to Generalists.



Percent of anglers in each specialization group



Percent of anglers expressing satisfaction/dissatisfaction

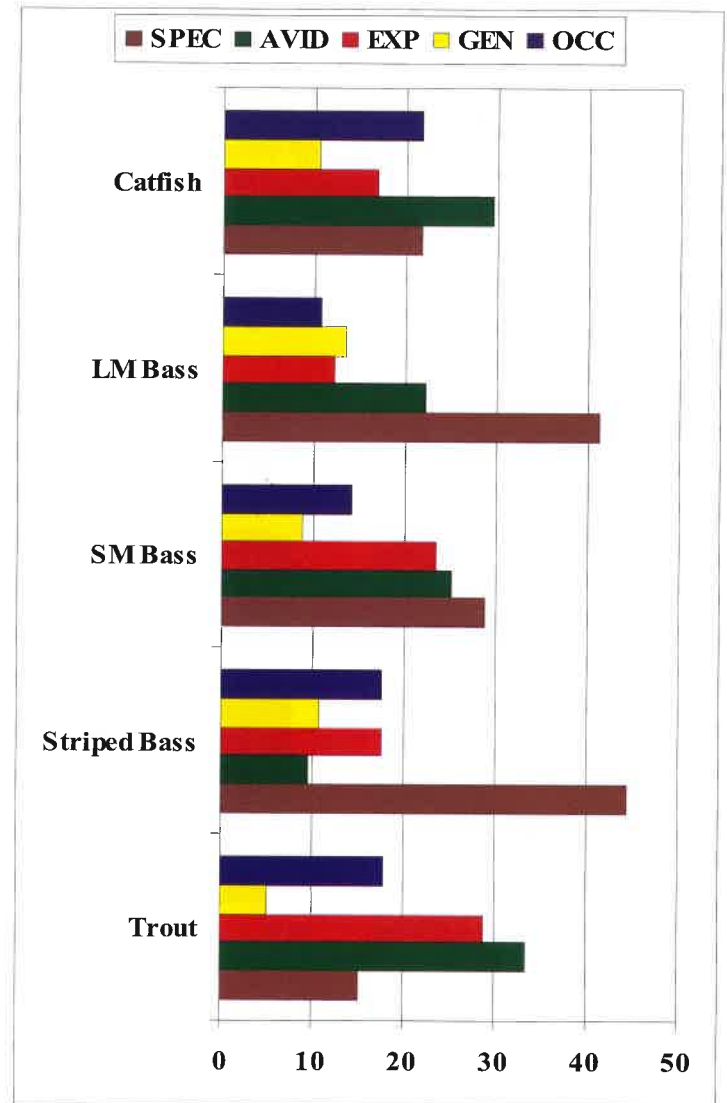
How satisfied are anglers of different specialization levels?

Specialist and Avid anglers expressed the highest levels of satisfaction, while Occasional and Experienced Generalist anglers expressed the lowest levels of satisfaction. This is significant for two reasons. First, Specialist and Avid anglers account for 81% of all days of fishing reported by survey respondents (because they fish much more often than the other groups), indicating that the great majority of anglers in the field are satisfied with their experiences. Second, Experienced Generalists were the most consumptive-oriented anglers, indicating a potential problem with anglers who are focused on keeping fish to eat.

For fishery managers, the most useful application of this information is the combination of species preference and specialization level

The mix of anglers in each species preference group differed significantly.

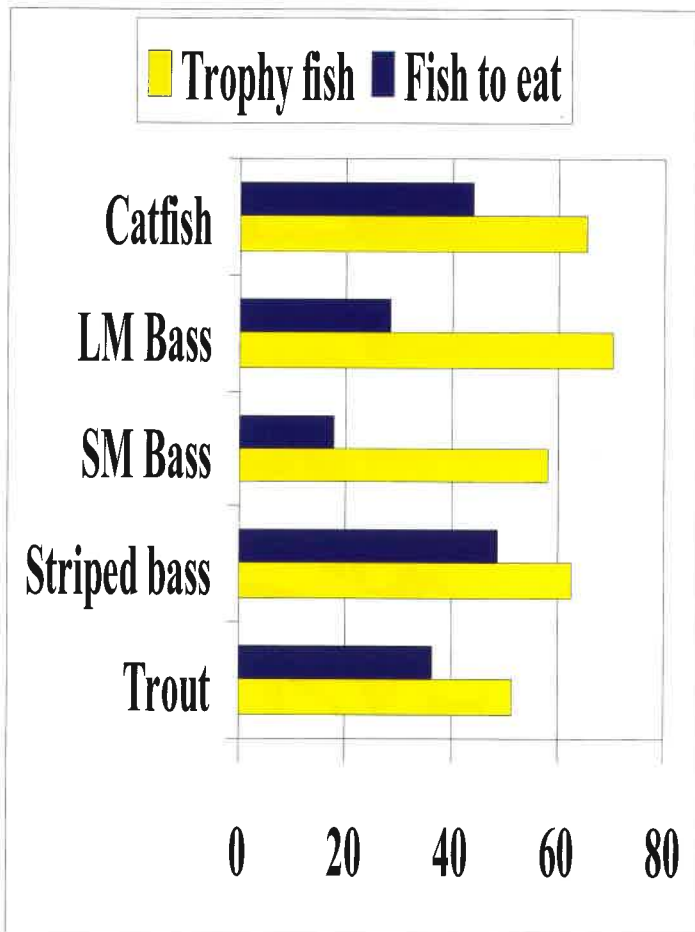
Striped bass and largemouth bass anglers were predominately specialists with a strong interest in catching trophy fish. Most trout anglers fell into the Avid and Experienced Generalist categories, indicating high participation rates and greater interest in keeping fish to eat. Catfish and smallmouth bass anglers were more evenly split among the categories.



Percent of anglers in each specialization group by species preference

The motivations of Specialist anglers differed by species preference.

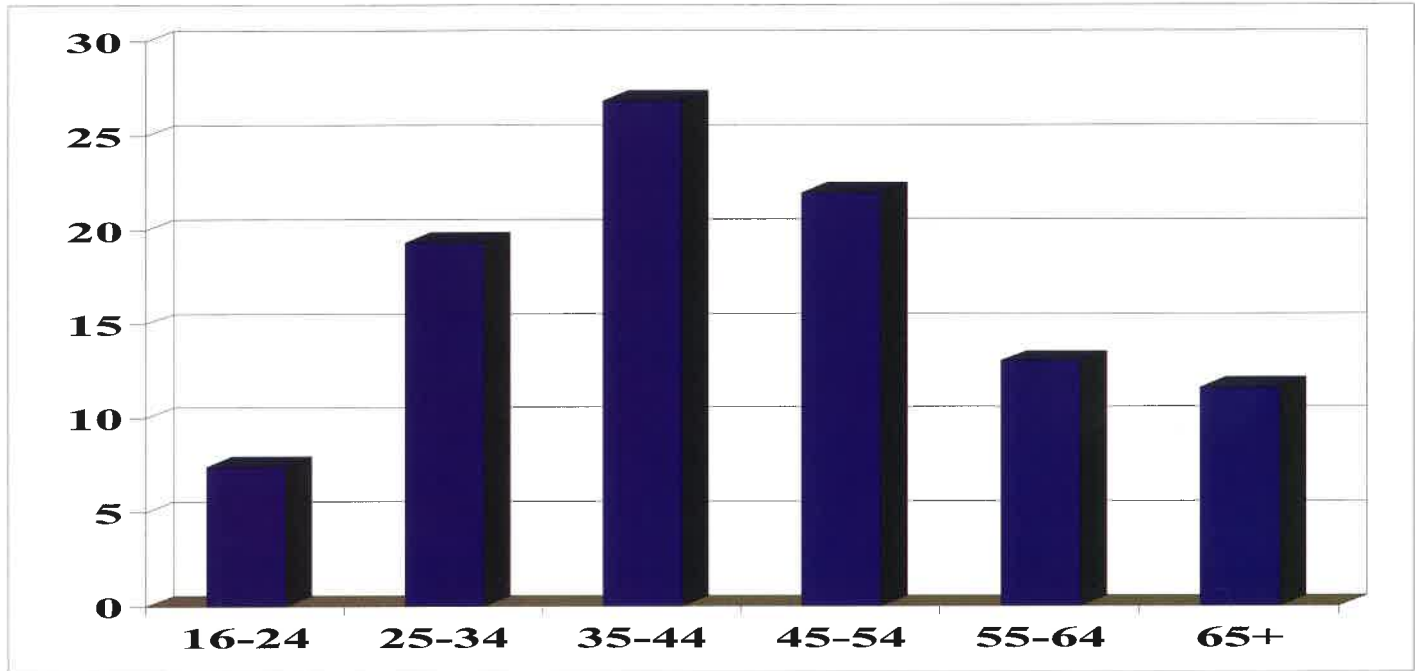
Catching trophy fish was important to a majority of specialists of all species preferences. Few smallmouth bass specialists thought that catching fish to eat was important, but a significant percentage of specialists of all other species preferences viewed eating fish as an important outcome of fishing. This illustrates the difficulty of pleasing these anglers. They prefer large fish but also want to keep them to eat—outcomes that can be mutually exclusive.



Percent of Specialist anglers in each species preference group responding somewhat or very important

How can the Department of Game and Inland Fisheries use this information?

To manage effectively, the Department of Game and Inland Fisheries needs to think in terms of market segments, that is, groups of anglers that share similar interests but differ in some important aspect from other groups—all within the biological capability of fish populations, of course. This survey provides much information that can be used to identify managerially significant market segments. Given that 60% of Virginia anglers in 1999 were 40 years or older, this approach to management will become even more important in the future as the Department works to ensure that fishing remains one of the primary activities of outdoor recreation.



Percent of anglers in each age group

For more information, contact : Virginia Department of Game and Inland Fisheries, 4010 W. Broad St., P.O. Box 11104, Richmond, VA, 23230-1104. Telephone (804) 367-1000. www.dgif.state.va.us



This survey was a joint project of the Virginia Department of Game and Inland Fisheries and Virginia Tech's Department of Fisheries and Wildlife Sciences. Funding was provided by the Federal Aid in Sport Fish Restoration Fund.