Four states reared 5,372 of the pure strain *persicus* type. A total of 2,140 was released in Kentucky, Maryland, Missouri, and Virginia in the past four years (Table III). Tennessee expects to initiate liberations in the fall of 1964. Virginia reported good numbers of birds observed and reproduction excellent. Crowing count indices were low in Missouri. Reproduction was noted in Maryland. The pure strain birds were mixed with crosses on one area in Kentucky and results have been rather poor so far.

A total of 16,787 of the *persicus*-ringneck pheasants was reported raised by five states since 1960. Here too, egg production was greater than for the pure strain. Six states reported releasing 23,941 individuals since 1959 (Table IV, P. 118). As with the *talischensis* birds the results have been varied Arkansas reported several adults and broods observed prior to October 1961. Kentucky had some reproduction but termed the results rather poor. Maryland recorded good, fair, and poor results. Increasing brood counts and crowing-cock indices offered promise in Missouri. Tennessee reported encouraging findings in one county. Virginia experienced low reproduction and a decline in the population.

Five hundred and seventeen birds of a *talischensis-persicus*-ringneck cross have been released on two areas in Virginia in the 1959-62 period (Table V, P. 119). No results were given.

To sum up, 42,262 pheasants of the blackneck group (including crosses) were reported released in the Southeastern states in the last six years. Additional 1963 fall releases are anticipated. Results have varied from complete failures to reported successful establishment from state to state and within states. It would appear that we need to take a close look at the environment where the birds have shown a marked degree of success and evaluate the various components. Subsequent introductions can then be made in all potentially successful areas. Where we have met with failure, we should try other likely habitats until a true test for a particular subspecies or cross has been attained.

Although details of the habitat requirements of the blackneck group are not too well known, it is believed that "clean farming" trends and increased acreages devoted to permanent pasture are factors generally detrimental to them. Potential pheasant habitat may be slipping away from us.

The Foreign Game Committee stands to serve a practical and important function to blackneck introductions and follow-up investigations. This involves the setting of suggested standards and procedures for determining population levels (i.e., uniform crowing-cock surveys, field censuses) so that state-to-state comparisons can be made. It may also serve as disseminator of pertinent research findings which will be of great benefit and interest to field investigators and administrators throughout the Region. It is a pleasure to report that these initial steps have already been taken.

LITERATURE CITED

U. S. Bureau of Sport Fisheries and Wildlife. 1962. Progress Report of the Foreign Game Introduction Program. Summary of Foreign Game Bird Propagation and Liberation Results by States—1960-1962. Report Number 12.

THE BLACK FRANCOLIN

BY ROBERT E. MURRY, *La. Wildlife and Fisheries Commissioner*

While a critical evaluation of the present status of the black francolin (*Francolinus francolinus*) is needed, it is too early to give more than a rather sketchy report at this time.

The black was recommended for trial liberation by personnel of the Foreign Game Introduction Program, of the Bureau of Sport Fisheries and Wildlife. Releases of wild trapped birds were made in Alabama, Arkansas, Florida, Kentucky, Louisiana, Oklahoma, and Virginia be-

TABLE IV
PERSICUS X RINGNECK RELEASES

State	Year	Number Released	Source	Direct or Gentle Release	Month Released	Area	Results to date
Alabama		None					
Arkansas	1961	76	Farm (Mo.)	Direct	Apr.	Rainey Brakes	Birds dispersed but several broods rep.
	1961	12	(Mo.)	Direct	Apr.	Marianna	Two broods reported but no
	1961	12	(Mo.)	Direct	Apr.	Wattensaw GMA	birds seen after Oct. 1961.
Florida		None					
Georgia		None					
Kentucky	1961	228	Farm	Direct	Summer	Christian Co.	
	1962	317	Farm	Direct	Apr.-Oct.	Christian Co.	One nest, 10 broods recorded
	1963	115	Farm	Direct	April	Christian Co.	Dispersed up to 12 miles One nest, 7 broods recorded. Rather poor.
Louisiana		None					
Maryland	1961	9	Farm	Direct	March	Worcester County	Poor
	1961	62	Farm	Direct	March	Worcester Co.	Good
	1961	58	Farm	Direct	Sept.	Harford Co.	Surplus cocks only
	1961	26	Farm	Direct	Apr.-Oct.	Cecil Co.	Surplus cocks
	1961	37	Farm	Direct	Oct.	Baltimore Co.	Surplus cocks
	1962	95	Farm	Direct	Mar.	Worcester Co.	Good
	1962	80	Farm	Direct	Mar.	Somerset Co.	Good
	1962	81	Farm	Direct	Mar.	Dorchester Co.	Good
	1962	42	Farm	Direct	Mar.	Wicomico Co.	Good
	1963	30	Farm	Direct	Mar.	Worcester	Poor
	1963	50	Farm	Direct	Mar.	Somerset	Fair
	1963	50	Farm	Direct	Mar.	Dorchester	Fair
	1963	50	Farm	Direct	Mar.	Wicomico	Fair
	1963	50	Farm	Direct	Mar.	Talbot	?
Mississippi		None					

Missouri	1959	1,633	Farm	Gentle	Fall	Centralia	29 broods in 1960
	1961	——	Farm	Gentle	Feb.-Apr.	Centralia	45 broods in 1961 49 broods in 1962 Crowing-cock indices show promise. 1963 — data not yet available.
North Carolina		None					
South Carolina		None					
Tennessee	1960	5,393	Farm	Direct	Sept.-Nov.	Monroe, Cumberland Benton, Roane Cheatham, Coffee Counties	Broods observed at all areas. Results encouraging in Monroe County.
	1961	5,785	Farm	Direct	Aug.-Oct.	Monroe, Benton	Same as above.
						Roane, Cheatham	Same as above.
						Coffee, Meigs and Grainger Counties	Same as above.
	1962	894	Farm	Direct	Aug.-Oct.	Lawrence Co.	Same as above.
	1962	1,899	Farm	Direct	Aug.-Oct.	Greene Co.	Same as above.
	1962	1,144	Farm	Direct	Aug.-Oct.	Meigs Co.	Same as above.
	1963	570	Farm	Direct	Aug.-Oct.	Lawrence Co.	Too early to tell.
Virginia	1959	1,310	Farm	Either	Oct.-Apr.	Halifax, Campbell,	Low production and general decline in population.
	1960	999	Farm	Direct	Oct.-Apr.	Charlotte, King,	
	1961	1,287	Farm	Either	Oct.-Apr.	George, Fluvanna,	
	1962	514	Farm	Either	Apr.	Nelson & Cumberland Counties	
	1963	1,033	Farm	Direct	Apr.-Sept.	Fluvanna-Goochland-Page Counties	Some sign of reproduction, but less than talis.

TABLE V
TALISCHENSIS X PERSICUS X RINGNECK RELEASES

State	Year	Number Released	Source	Direct or Gentle Release	Month Released	Area	Results to date
Virginia	1959	333	Farm	Direct	Oct.	Camp Pickett	Not known
	1960	137	Farm	Direct	Oct.	Cumberland Co.	Not known
	1962	47	Farm	Direct	Oct.	Cumberland Co.	Not known
	1963						

tween 1960 and 1962. Hawaii, Nevada, New Mexico, and Guam are also attempting to establish the black francolin but will not be discussed in this report.

During the three-year period 3,251 wild birds were imported from India and released in these states under consideration. Ninety-eight game farm birds were also released here during this period.

In an effort to obtain factual information I have resorted to that despicable old trick of too many paper writers—the questionnaire. A form was sent to a mailing list of personnel from cooperating states, and the response was excellent. Questionnaire data were tabulated for examination and liberal use has been made of the F.G.I.P. Progress Report of 1962.

Personnel of some states are discouraged by the results of their francolin work to date. From other states the reports are far more optimistic. Detailed examination of the information I have available fails to indicate a clear reason for these differences. Latitude can be ruled out when we note survival and reproduction from releases in Kentucky and Florida and much less favorable results from Alabama releases.

In more cases than otherwise, favorable results were obtained by relatively large releases of wild trapped birds which were repeated a year later. The best examples of this are provided by the encouraging Avon Park, Florida release and releases on the two Louisiana areas known as Oak Ridge and Gum Cove. Least favorable results were from small releases of wild birds. One notable exception to this is the York Prison Area release in South Carolina, which though small is prospering. Too few releases of game farm birds have been observed for comment at this time.

These "favorable results" I speak of are meant to indicate the following:

(1) Birds remaining in breeding density on or near the release area.
(2) Pairing, calling, nesting, and hatching of young.
(3) The rearing of young to breeding maturity in numbers that approach or exceed the drain of the adult population from all mortality sources.

If the black francolin does favor us with his presence in years to come several questions are raised. While you must realize that hard and fast answers are impossible I can give you some impressions I have gathered from observing releases in Louisiana.

Question: What habitat or land use type will he thrive best in?

Answer: Unknown—the bird has impressed me by use of heavy stands of temporarily ungrazed Dallis grass (*Paspalum dilatatum*) and Vasey grass (*Paspalum urvillei*) which were far too rank and dense for feeding quail. Another extreme of cover use has been ready occupancy of closely grazed pastures many rods from overhead cover. The latter has occurred only in late winter where heavy cattle use greatly restricts bobwhite habitat.

Question: How will we hunt blacks?

Answer: My present belief is that pointing or flushing dogs will be in general use. A few birds elect to hold tight but many run. Dogs will have to adapt to the birds' habits. Party drives through francolin cover may prove attractive but many birds will fail to flush for drivers.

Question: How will this bird be censused?

Answer: We are also looking for answers to this question. An index to calling males seems to be relatively simple to obtain.

The relationship of calling males to occupied breeding territories, to nearby hens and to total population is unknown. Sight records reveal a great many males per hen. That this is not a true ratio is demonstrated by work with trained dogs. Dog census reveals an approximately equal sex ratio.

Summer call counts correlated with fall bird dog census may help us here.

Question: What do they eat?

Answer: We have not collected birds for examination yet. General observations in the field, and of penned birds, indicate that insects,

seeds, and greens all play a role in feeding habits. In crowded situations they have been observed around cattle feeding areas where waste grain had been introduced with mixed feed and with hay. Here they were observed to dig into manure and we assumed that large undigested agricultural grains had attracted them. In one instance an adult male was observed to scratch through fairly fresh manure in the early fall before supplemental cattle feeding began. The largest particle size available here was the relatively small seed of dallis and vasey grass.

The best we can do with any untried exotic is to carefully catalog his native habitat and then to attempt to match that with a habitat we have where a species is needed. If a relatively small fraction of these educated guesses turn out well we can learn from our failures and build on our successes.

The black francolin has earned careful consideration for future work. We should be ready for competent research biologists to make full time studies of the black francolin that result from the initial trials. Further work is needed with hatchery rearing techniques and massive releases of good hatchery reared stock should be a next logical step in our investigations.

In Louisiana a shortage of trained personnel has hampered our follow-up studies. We look forward to an improvement of this situation and hope to carry our portion of the work necessary to determine if we are to accept or reject this candidate for citizenship.

THE JAPANESE GREEN AND KALIJ PHEASANTS IN VIRGINIA

BY H. J. TUTTLE
Foreign Game Biologist
Virginia Commission of Game and Inland Fisheries

One species of the pheasant group that has shown good progress in limited stockings in Virginia, but has received little recognition in other sections of the Southeast is the Japanese green, *P. c. versicolor*. Its introduction was made in 1959 when approximately 30 birds were received at the Virginia Game Farm from the wilds of Japan. All of these birds were held for game farm breeding, resulting in the production of a sufficient number for the first release in the fall of 1960.

Early information on the species indicated that its range type was extensive agriculture interspersed with woodlots and wetlands and similar to types found in many sections along the coastal areas of Eastern Virginia. This is not meant to imply that its range is limited to this type, and studies now indicate that it may extend even into the Piedmont regions. Other states experimenting with the species include Georgia, Tennessee and Ohio. Recent requests for stock has come from Indiana and Idaho. Further studies are needed before positive recommendations can be made.

At this time Virginia's stockings are limited to the coastal areas of the state. Stockings of all groups in Virginia are widely separated to avoid an overlap of range and the first area selected for the Japanese green was on Virginia's Eastern Shore. This is a two-county area separated from the mainland by the Chesapeake Bay and bounded on the East by the Atlantic Ocean and on the North by the State of Maryland.

Diversified farming is the pattern of agriculture and truck crops such as tomatoes, asparagus, string beans, sweet potatoes and some strawberries are grown. Other crops are corn, soy beans and small grain. Livestock grazing is low in most areas. Timber harvest has been extensive over the years and much of the timberland is cut over or is young growing forests, much of which supports high populations of native upland game species.

Paper presented at the 17th Annual Conference, Southeastern Association of Game and Fish Commissioners held September 30, October 1-2, 1963, at Hot Springs, Arkansas.