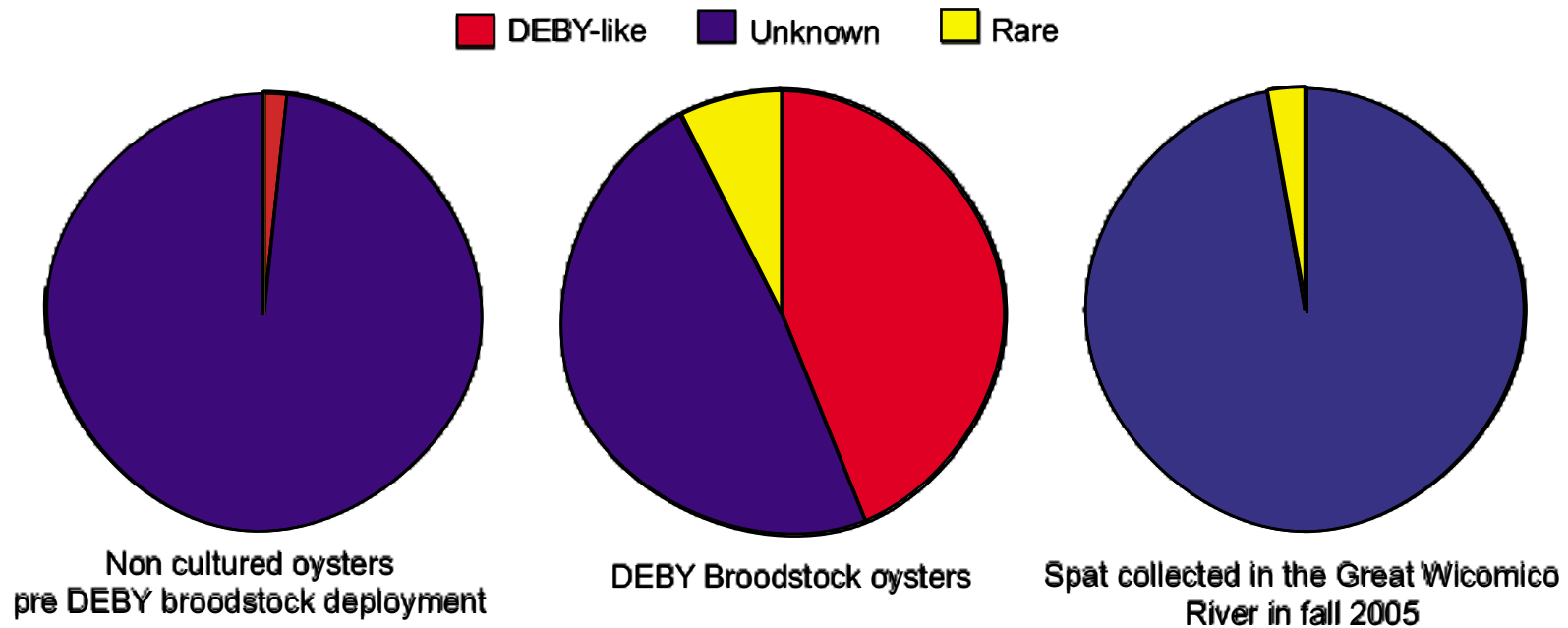


Speaker's Notes: Shell Bar Reef, Great Wicomico River: Mitochondrial DNA Genetic Data 2005

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The disease tolerant oysters that are deployed on the reefs in the Great Wicomico River belong to the hatchery produced DEBY strain and carry a special mitochondrial DNA "DEBY like" signal that is almost exclusively in the mid-Atlantic region found in the DEBY strain. This enables us to screen the spat fall following DEBY deployments to determine whether the deployed DEBYs have produced offspring by looking for the genetic signal. The DEBY-like signal typically occurs in 20-70% of the DEBY oysters. The frequency of the genetic signal varies with every spawn, but this signal is virtually absent in other oyster strains. This means that when we detect a DEBY-like signal in a spat it is a good indication that the DEBYs have reproduced. On the other hand, absence of the signal does not mean that the spat is not an offspring of DEBYs, as this unique signal is not present in 100% of the DEBYs that are deployed on reefs. Therefore, if the signal is absent in an oyster we use the term "unknown" to indicate that we do not know whether it is an offspring of DEBY or wild parents. In addition, there is a small proportion of oysters with rare mitochondrial DNA types. These rare types can typically be found in all strains at a very low frequency, but because they occur in all strains they can not be used as "strain signals". Therefore, we have pooled all these rare types into the group we label "rare". We report three genetic types of oysters based on their mitochondrial DNA profiles, 1) DEBY-like, 2) unknown and 3) rare.