



## Inventor(s)

### Dr. Konrad Dabrowski, PhD

Dr. Konrad Dabrowski is a professor in the School of Environment and Natural Resources at the Ohio State University. Dr. Dabrowski's main research interests include fish physiology, genetics, and nutrition. He has written over 400 scientific publications and is a member of numerous editorial boards for journals on fisheries and aquaculture. Dr. Dabrowski received his PhD from Agriculture University in Olsztyn, Poland in 1976 and joined Ohio State in 1989.

### Thomas Delomas, MSc

Thomas Delomas is a PhD Candidate in the School of Environment and Natural Resources at the Ohio State University. Mr. Delomas currently studies genetics and reproduction in percids, cichlids, and zebrafish. He has published in national and international scientific journals. Mr. Delomas received his MSc from Kentucky State University for research on hybridization and genetics in cyprinids.

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## College

College of Food, Agricultural, and Environmental Sciences (CFAES)

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# Techniques for the Production of Hybrid Blood Parrot Cichlid Fish

## Description of this Hybrid and the Invention

The blood parrot cichlid is a freshwater ornamental fish known for its unusual shape and "personality". These fish have parrot-like beaked mouths, a humped back, and rounded profile. "Personality" is one of the blood parrot's most distinctive features and virtues. Being very docile compared to other cichlids, they can be kept in aquaria with almost any other fish. Blood parrots are black/brown in color when smaller than 1 inch in length, but change color gradually as they grow. By the time they are a marketable size (2 inches), their coloration becomes orange/red.

Techniques for the production of this fish, including artificial spawning, larval rearing, and juvenile growout, were developed. Fertilization rates over 90% were achieved by artificial spawning. Larval and juvenile rearing techniques consistently yielded survival rates over 95% from the swim-up stage to 1 month old juveniles. Acceptance, survival and growth on live feeds and dry diets as a first feed was evaluated. Rearing techniques resulted in rapid growth with fish reaching market size of 2 in (5cm, 5g) at 80 days post-fertilization. Complete color change to orange/red was observed (Figure) at 80-120 days.

## The Market

- The United States fish and seafood aquaculture industry revenue was \$1.459 billion in 2016 and is expected to reach \$1.476 billion, at a CAGR of 0.2%. The sale of ornamental fish accounts for 3.0% of total industry revenue.(IBISWorld)
- World trade of blood parrot is estimated at \$10 million annually. Retail value in the United States of individual juvenile fish is \$10-\$40, and adults from \$100 to \$300
- Demand for ornamental fish has increased over the past five years due to growth in discretionary income.

## Contact Information

If you are interested in learning more about this particular hybrid or would like to discuss obtaining this Hybrid Cichlid please contact the following individuals:

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