

Black-Bone Silky Fowl: An odd bird with meat to crow about

September 13 2006



The Black-Bone Silky Fowl, which has a time-honored place in traditional Chinese medicine, certainly lives up to its name. The silky white feathers on the exterior of this odd bird cover black bones and black meat, which researchers have identified as a rich source of a reputedly healthy compound. Photos courtesy of Yingang Tian

Food scientists from the Peoples' Republic of China report a biochemical explanation for the Black-Bone Silky Fowl's 1,000-year-old reputation as a marvel of traditional Chinese medicine. The study is scheduled for presentation at the 232nd national meeting of the

American Chemical Society, being held here this week.

One odd bird, indeed, this chicken sports an abundance of snow-white feathers that feel as smooth as silk. Underneath is black-colored skin, black meat and -- you guessed it -- black bones.

The Black-Bone Silky Fowl is a special bird in China, explained Mingyong Xie, Ph.D., of the Key Laboratory of Food Science of the Ministry of Education at Nanchang University in Nanchang. Xie and colleagues conducted the study.

"As a kind of folk invigorant and a source of traditional Chinese medicine, it [the chicken] is used to reinforce body immunity and protect from emaciation and feebleness," added co-researcher Ying-gang Tian in an interview. It also treats diabetes, anemia, menstrual cramps and postpartum disorders, according to Tian.

While looking for an explanation for the bird's reputed medical abilities, which date to at least the early 1000s A.D., Xie's group began to wonder whether carnosine, a naturally occurring peptide, might be partly responsible. Carnosine may be most familiar in the West as a dietary supplement. People take carnosine supplements in the hope of increasing muscle strength, warding off the effects of aging and alleviating diseases such as autism and diabetes.

Knowing that meat and poultry are good natural sources of carnosine, Tian searched for existing studies on the carnosine content of Black Bone Silky Fowl, but found that none had been done. His group decided to use a standard laboratory instrument -- high-pressure liquid chromatography (HPLC) -- to fill that information gap.

They analyzed and compared carnosine levels in Black-Bone Silky Fowl and White Plymouth Rocks -- "common" chickens that come in a range

of colors and are one of the world's most popular for eggs and meat. The research involved developing a method for using HPLC to analyze carnosine in chicken, boning and grinding the meat from 200 Black-Bones and 200 Rocks, and then testing the samples.

Black-Bone Silky Fowl had twice as much carnosine as the Rocks -- with carnosine comprising 0.45 percent of the muscle in Black-Bones compared to 0.22 percent in Rocks. "We haven't tested the content of carnosine in other animals," said Tian. "According to other reports about the content of carnosine in other food, we are sure that Black-Bone Silky Fowl is one of the richest sources of carnosine, and it's easy to get."

So far, Chinese farmers export only small quantities of Black-Bone Silky Fowl, and those birds go mainly to southern Asia and Japan, Tian said. Tian hopes the ACS report will increase awareness about this odd bird in the United States, and eventually put Black Bones on fast food and home menus.

If that happens, consumers can look forward to clucking over a tastier and perhaps healthier chicken, with only one blip on the horizon: "The taste of Black-Bone Silky Fowl is usually better than other kinds of chicken," Tian pointed out, "but its unusual color -- black meat -- make some people hesitate to eat."

Source: American Chemical Society

Citation: Black-Bone Silky Fowl: An odd bird with meat to crow about (2006, September 13) retrieved 27 April 2024 from <https://phys.org/news/2006-09-black-bone-silky-fowl-odd-bird.html>

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