

## **The Benefits and Limitations of Milk Thistle as a Nutritional Supplement for Birds**

by Desi Milpacher

A member of the daisy family, the milk thistle, a waxy-lobed, thorny plant grows wild in Europe and has spread easily to other parts of the world. The attractive purple-pink flowers bloom in spring, drying out by the time summer comes. This relatively unadorned plant may be fairly commonplace – but it just may have a lot to offer as a therapeutic agent in the field of medicine, both human and veterinary.

Milk thistle (*Silybum ebumeum* or *Silybum marianum*) has been used for over 2000 years as a remedy for various types of liver disease. Since 1969 compounds of milk thistle have been available for medical use in Europe. Milk thistle is classified as a nutraceutical [a substance that provides agents required for normal body structure and function, administered for health and well being]. Since its introduction there has been mounting evidence that this therapy's active ingredient silymarin has benefits for various kinds of liver and gallbladder disorders in human and animal medicine – potential antioxidant and anti-inflammatory properties. While results in human studies have been mixed data collected in studies in pigeons has been positive, and there has been numerous anecdotal accounts from bird owners.

In a study where liver disease was induced in a group of pigeons the disease preventative value of milk thistle extract was examined, ultimately showing some protective properties when the study concluded. The benefits of using milk thistle in the treatment of liver disease have been somewhat unclear, however, due to the uneven quality of the most studies involved. A review of various studies of silymarin and liver disease did show one clear point: studies which tested low dosages of silymarin concluded that the active ingredient was ineffective, while studies which used larger doses proved that silymarin had some therapeutic effects. All of this has left clinical practitioners to conclude that while there is some evidence of beneficial effect, this remedy should best be used as an adjunct to traditional supportive care in the treatments of liver and gall bladder disease in humans and in pet animals. And there has been much anecdotal evidence from parrot owners themselves, who observe that their charges' health has improved dramatically with the introduction of milk thistle into their diets after bouts of hepatic lipidosis, or fatty liver disease, a disorder highly prevalent in captive psittacines.

With the treatment of fatty liver disease, therapy generally includes medication, along with diet alteration and reduction in weight in the affected bird. Increasingly, milk thistle is thereafter used as a remedy to help prevent recurrence of the disease and as a well-being tonic. Suggested doses for silymarin range from 50-250 mg/day (100-150 mg/kg every 8-12 hours in birds), and this is dependent on the purity and potency of the various commercial milk thistle products. Milk thistle is reported to have a very low toxicity – in at least one study normal cats were found to have no outward clinical signs of toxicity given a dose of 5 mg/kg, an important finding since felines are more prone to liver problems occurring from medication and other compound usage given their highly specialized liver function. As well, no research has been done to date on

possible drug interactions with silymarin, and more investigation is needed, although it is generally understood that some interactions are likely.

Because these types of supplements, as of now, do not need approval from the FDA before they are marketed there are no regulations in place for their manufacture; the makers of these products are also not required by law to forward to the FDA any reports they receive of injuries or illnesses that may be related to their use. Without these safeguards it is difficult to regulate what may or may not go into each product, not easy to confirm that these products are medical grade, the highest standard in the industry. Some steps that may be taken if one is considering the use of milk thistle and other nutraceuticals or supplements:

- 1) Look for the "Meets USP Specifications for Potency, Uniformity and Disintegration, Where Applicable" label on the supplement packaging;
- 2) Find out if the company manufacturing the supplements follows Good Manufacturing Practices for drug grade and not food grade standards, and;
- 3) Establish if the manufacturer is currently regulated by a governmental agency.

On the whole, milk thistle and other supplements have great potential for use in alternative, western and complementary medicine for humans, avians and otherwise – plant-based medicines have, after all, been used for thousands of years. Care is needed, however, to ensure the safety of one's pets, in using any form of medicine. If a substance can have a positive effect, with incorrect usage it can almost certainly have a negative one.

**Sources:** Wikipedia – definition milk thistle; Brian Speer, DVM, Diplomate, ABVP, Certified in avian practice, Diplomate, ECAMS, Certified specialist in avian medicine and surgery (Europe), pers. comm.; Nutraceuticals in Liver Disease, David C. Twedt, DVM, DACVIM; Nutraceutical Drug Interactions, Lauren A. Trepanier, DVM, PhD, DACVIM, DACVCP; Use of Milk Thistle to Reduce Aflatoxin Poisoning in Pigeons (*Columba livia*), Judith M. Grizzle, PhD, MS, et al; Liver Disease in Avian Patients, Michael P. Jones, DVM, DABVP (Avian)

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