

## PROPOLIS

The word "propolis" comes from the Greek, meaning "before the city". It is so-called because of bees' habit of placing the substance around the entrance of their hive and at the junction between combs and the surface from which they depend. Bees will also use it to patch up any cracks in their hive, to deter invaders and to seal off drafts. Also, because of the sticky nature of propolis and its positioning at the entrance as a "welcome mat" returning foragers must, in effect, wipe their feet as they enter the hive. In this way dust and debris brought back to the hive that might harbor pathogenic bacteria are left behind rather than spread to the brood combs where microorganisms might infect the larval bees with one of numerous diseases to which developing insects are prone. In addition, the substance may serve to deter raiding by ants because of its stickiness and perhaps because the odor of the propolis masks the attractive odors of the nest.

Propolis is usually a combination of plant waxes and resins collected from buds and tree wounds. Bees have also been known to collect drying paint, caulking and other adhesive materials to incorporate into the sticky mass. They transport the propolis back to the hive in the same way that they do pollen-- in pellets carried on the "pollen baskets", or corbiculae, found on their hindmost legs. The propolis is applied where needed by the bees chewing the stuff and manipulating it with their mouth-parts.

The medicinal properties of propolis, of course, depend on the source of resins and waxes that make it up. Some degree of antibiotic properties have been attributed to all propolis thus far studied and some of the chemicals responsible for this action have been isolated. Although there is no ailment for which propolis is specifically recommended many people take encapsulated propolis on a regular basis as a prophylaxis against disease, especially of the intestinal tract. It is advised that a hearty *caveat emptor* be associated with any claims regarding the efficacy of this practice. It probably can't hurt-- which nowadays might amount to a substantial endorsement-- but it is impossible to make accurate statements regarding the characteristics of propolis without definitive knowledge regarding the plant sources from which it has been derived. With that disclaimer, a recipe for a burn ointment is hereafter reproduced. At least one commercially available product, toothpaste (of several brands), lists propolis as one of its ingredients.

## BEESWAX AND PROPOLIS BURN OINTMENT

This ointment for burns was originally intended to be used with propolis and wax from a stingless bee colony (*Melipona* sp) as it is a variant of a formula used by the Mayan indians. Equally satisfactory results can be obtained using the bee products available more commonly.

38 gms beeswax  
20 gms propolis  
10 gms pulverized aloe  
30 gms water  
1 gm borax

Grate and melt together the beeswax and propolis. Remove from heat and add the remaining ingredients. Store in a jar.

*Following are portions of a related exchange on Bee-L list serve (my responses follow those followed by the '> ':*

> Four years ago I, my wife, and my son were plagued by ear,  
> throat and sinus infections...  
> Antibiotics kill ALL bacteria, both the good and the bad...  
> ...not only does propolis seal holes and cracks, it's a  
> natural germicide.

If propolis is a "natural germicide" then it is, by definition, an antibiotic. Many (most?) drugs used as antibiotics are derivatives or synthetic analogs from natural sources (plants or other microbes-- remember the penicillin from moldy bread?). One must distinguish between wide-spectrum antibiotics and those that are more specific. Likewise one should also remember that the properties of propolis will vary with the sources of plant resins (and other sources such as wet paint, tar, and insect-trapping adhesive) which bees will collect and incorporate into that catch-all propolis.

One really can't make accurate broad, unqualified generalizations like "propolis is good for you"-- just as one really can't even say that about honey (as we all know some honeys are actually poisonous) or fruit (some fruits are poisonous)

Not that I'm disputing (questioning isn't the same as disputing is it? ;-)) your experience with propolis as a more specific antibiotic for what ailed you but the source of the propolis is probably more important than that it contained bee secretions. (It is my understanding that propolis from alder trees is, supposedly, the most desirable). So as not to appear a total "nay-sayer" I have seen clinical documentation for positive results in the application of some kind of propolis in veterinary medicine.

> it's my understanding that the inside of a bee hive is  
> one of the most sterile places on the earth (more sterile than  
> an operating room).

As far as a beehive being more sterile than an operating room-- any beekeeper who has had experience with brood diseases such as chalkbrood, foulbrood, noseema, etc will tell you that it just ain't so-- the antibiotic properties of propolis, wax and honey are what make the place livable at all ;-).