



BOGUS *KRATOM* MARKET EXPOSED

by JON HANNA

An increasing number of sources have been selling what they claim is dried leaf of *Mitragyna speciosa*, known by the common name *kratom*. Much of this material originated from BRUNO PHILLIPS, of EBOTASHOP (4 rés. le Clos des Charmes, rue Emile Zola, 5000 La Roche sur Yon, FRANCE, www.ebotashop.org, e_bota@hotmail.com), who says that it was sourced from Myanmar, Burma. PHILLIPS and an individual who goes by the name of FARMER HANK were approaching numerous retailers of specialty ethnobotanicals and persuading them to carry this product. The material is being made into extract in the United States, described by different companies as “*kratom* acetate,” “mitragynine acetate,” and “full-spectrum alkaloid free-base of *kratom*.” One of the people to whom PHILLIPS pitched the dried leaf material for resale was DANIEL SIEBERT. SIEBERT astutely noticed that this leaf does not match the published description for the plant—the venation pattern on the leaves was not right and the underside of the leaves was entirely covered in trichomes, giving the leaf a hairy appearance. According to the published botanical description for the leaf of this plant, the top is supposed to be glabrous (smooth), and the bottom has no trichomes present on the interneural parts of the lamina (SHELLARD & LEES 1965; SIEBERT 2003). SIEBERT suggested that it would be a good idea if I notified *ER* readers of this misidentified leaf material. It has been suggested that over 100 kilos of this mystery herb may have been distributed by PHILLIPS worldwide at prices ranging from \$200.00 to \$600.00 per kilo (SHAMAN AUSTRALIS 2003); if this true, there is a *lot* of bad material on the market.

Strangely, some people claim that this material is psychoactive in a manner similar to *kratom*. Others notice no activity at all. It has now been shown that this material is not *kratom*, both due to its incompatible botany and due to it not containing mitragynine, a target alkaloid unique to *Mitragyna speciosa*. It would be interesting to know whether or not those who claim that this material has “*kratom*-like” effects have ever *tried* properly identified *kratom*. One person who has tried both, commented to me that the bogus material “had some sort of effect, though when comparing it to a small stash of *kratom* from Thailand I found in my freezer, it had none of the pleasant euphoria and mild rapture of attention, just a sort of beside myself disconnected state” (B.K. 2003). A sec-

ond person familiar with the effects produced from real *kratom* commented on the bogus material, stating: “We were sent samples a while back and were thoroughly unimpressed and questioned the validity of the sample” (A.C. 2003).

In order to help confirm that the material on the market was not actually *kratom*, I obtained a quantity of mitragynine ethane disulphonate from DENNIS MCKENNA to use as a reference standard for chemical analysis. There was concern that this material might have degraded, as it was around 14 years old. As an aside, it has been mentioned elsewhere that this reference standard was “obtained from [a] specialty chemical supplier,” which is not the case, and I have also seen it posted to an on-line forum that this material was synthetically produced, which is incorrect. HITOMITSU TAKAYAMA at the CHIBA UNIVERSITY in Japan was one of the first people to synthesize mitragynine in 1995 (SHULGIN 2003), which was only eight years ago (clearly the 14-year-old sample could not have been produced by synthesis). Just after I received the mitragynine ethane disulphonate, I was informed of a chemical supply company, APIN CHEMICALS, that offered a reference standard of mitragynine picrate (SHULGIN 2003). So I also purchased 10 mg of mitragynine picrate from them for the hefty price of \$250.00. Both forms of mitragynine were then distributed to several individuals who had an interest in analyzing the commercially available material.

The first results came in from SIEBERT, who performed thin layer chromatography on several samples of known *kratom*, putative *kratom*, and the mitragynine reference standards. He noted:

The mitragynine picrate and mitragynine ethane disulphonate both reacted with ERLICH’s reagent to produce pale purple spots on my TLC plates. Neither of these compounds [is] entirely pure. The TLC profiles of both samples were almost identical. Both produced two matching spots: one prominent spot (presumably mitragynine) and one smaller spot. The mitragynine ethane disulphonate also produced a third clear spot that was smaller than the other two and several additional very faint spots. I was also able to visualize the compounds using UV light. The larger spot absorbs short wave UV light. The smaller spots fluoresce bright yellow





under long wave UV light. Apparently mitragynine is reasonably stable, since the profile of the fourteen-year-old mitragynine ethane disulphonate was not substantially different than that of the recently procured mitragynine picrate.

I also examined “kratom acetate” sold by ETHNOGARDEN and leaves sent to me from France by BRUNO. These leaves are allegedly from Myanmar (Burma). The “kratom acetate” was supposedly isolated from leaves obtained from the [Burmese] source. Neither of these produced any visible indole spots on the plates when sprayed with ERLICH’s reagent. And when exposed to UV light, there were no spots corresponding to those in the reference standards. It is very clear that these do not contain mitragynine. This is not particularly surprising since the morphology of the leaves indicates that they are not *Mitragyna speciosa*.

I also analyzed leaves grown by [NATIVE HABITAT, SHAMAN AUSTRALIS, and J.B.]. And also leaves obtained from...Thailand, and some leaves from an “unknown source” that were sent to me by WILL BEIFUSS (probably [also from Thailand]). All of these produced spots that appear identical to the reference standards. In the case of the relatively fresh leaves obtained from [NATIVE HABITAT, SHAMAN AUSTRALIS, and J.B.], a green chlorophyll spot largely obscures the mitragynine spot, making it difficult to see. I was not able to see this clearly until I examined the chromatograms under UV light and compared them with the reference standards.

Additional results, this time from HPLC analysis, came in from MJB BOTANICALS, the U.S. company that had been producing the “kratom acetate” extract from the bogus leaves, that was sold via them, ETHNOGARDEN, and probably other vendors as well. They stated:

Solvent: 95% MeOH 5 % H₂O; Pressure: 1000 psi; Flow: 1.5 ml/min; Column YMC-Pack ODS-AQ; S-5 Micron 250 x 4.6 mm ID; 5 runs per sample; Run time 12 minutes; Alkaloid salts were converted to free-base forms with ammonia

The mitragynine ethane disulphonate was very contaminated, with an average of 7 peaks, with the biggest always being approximately 5.7 minutes. This product is too contaminated or degraded to use as a true reference sample.

The mitragynine picrate had 1 peak average, retention time of 1.6 minutes, with slight trailings being possible contaminates.

The “kratom acetate” had 3 peaks, with the largest being 2.3 minutes, and the others at 1.9 and 2.5 respectively, with no trailings.

Yohimbe had 1 peak average, with retention time of 2.4 minutes, with no trailings.

Melatonin (a tryptamine) had an average retention time of 3.8 minutes, with no trailings.

So I can say that that the “kratom acetate” does not contain mitragynine picrate or the other mitragynine compound. With the retention time being within 0.1 min of yohimbe, I would think that the active alkaloid might be a related compound or chemically similar.

Many companies that were known to have been offering the bogus leaf material or extract have been informed of these test results. Some companies have not at the time of this writing made any change in the manner in which they are selling the bogus material. Other companies are continuing to offer it (some under the name “Mellow Gold”), noting that the identity of the material is actually unknown, but stating that it has “kratom-like” effects. Based only on the few bioassays that I am aware of which were performed by people who have experienced the effects of real *kratom*, I would suggest here that to call the effects produced by this unknown material “kratom-like” is inaccurate. In addition, although there have been no known or reported side-effects from consuming the mystery herb or the extract made of it, it strikes me that it is irresponsible to continue marketing an herb that has not been identified—it could have chemicals in it that are carcinogenic or that cause liver damage, and the negative effects from ingesting these chemicals might not be apparent for some time. One company, CANNAPEE (www.cannapee.ch), appears to be claiming that the bogus material *is* some species of *Mitragyna* (which it may not be, and certainly isn’t *known* to be), although they have stopped selling it as *M. speciosa*.

To add to the confusion, some people growing properly identified *kratom* plants have obtained no activity from the leaves whatsoever. Others growing clones of the same plant have pointed out that the potency can be quite variable.

I have arranged for HPLC analysis and GC/MS analysis to be done on various plant samples, to determine whether or not they contain mitragynine, and if so, how much is there. This testing will be reported on in a future issue of *The Entheogen Review*. (Not all of the companies that provided me





with samples have had their material tested yet.) As well, microscopy work will be done on known *kratom* leaves, to create a database that will aid in proper identification of material that is offered commercially, hopefully helping to prevent scams in the future.

I should state that I do not believe that any of the retailers selling the bogus material were aware that it was not authentic. The blame for this scam lies with PHILLIPS/EBOTASHOP, the wholesaler who approached various retail companies with his so-called “*kratom*.” It has been said that he has refused to provide any refunds for those people to whom he sold the bogus material (SHAMAN AUSTRALIS 2003). As well, it is known that he is still selling the bogus material even after he was informed that it is not correctly identified. So, even if he was originally selling it by error himself (not knowing that it was misidentified), this can no longer be stated. It is still listed as being available at the EBOTASHOP web page. Some sales of PHILLIPS’ material were originally being brokered through SEBASTIAN TORRES (KITZU BOTANICALS). However, TORRES stopped facilitating such sales when he learned that the material was incorrectly identified, and FARMER HANK has also stopped selling the bogus material.

Those companies that are selling properly identified *Mitragyna speciosa* plants include SHAMAN AUSTRALIS, THE BASEMENT SHAMAN, THEATRUM BOTANICUM, and NATIVE HABITAT. This does not necessarily mean that all of these companies are selling plants that are potent or even active—NATIVE HABITAT has previously commented on the inactivity of the plants that they have. It is currently thought that climate may have an affect on the plant’s chemistry, and perhaps a change in climate may increase the potency of their plants. At this time I can not recommend purchasing *kratom* from any business other than those mentioned directly above. In the future I will provide names of any additional companies that are known to be selling dried *kratom* that tests positive for mitragynine.

So far as I am aware, there has been no definitive study in *humans* that shows that mitragynine is the primary active chemical in *Mitragyna speciosa*, although there have been studies with mice which seem to indicate that it might be (IDID et al. 1998). The sole known oral bioassay of 100 mg mitragynine produced no effects (WOGG 2000). In the 1960s, over 22 alkaloids were reported isolated from *Mitragyna speciosa* (JANSEN & PRAST 1988). A few of the alkaloids found therein include speciogynine, speciociliatine, paynantheine, mitragynaline, 7-hydroxymitragynine, corynantheidaline, 3-

dehydromitragynine, tetrahydromitragynine, mitralactonal, mitrasulgyline, mitralactonine, and 9-methoxymitralactonine—the last five of these are new as of 1998, and the last two are from young leaves (SHULGIN 2003). Clearly more work needs to be done with the plant; the isolation and quantification of chemicals from plants *that are known to be potent* would be a good first step. Bioassaying each of these compounds individually in amounts that are found in a comparable amount of a “dose” of active leaf would get us a lot closer to understanding what is going on. Hopefully someone with access to some quantity of potent leaf and the means to extract and isolate the compounds therein will employ the “HEFFTER technique” in the near future.

There has been some small amount of noise (mainly repeated by vendors of *kratom* or the bogus material) that in Thailand where *Mitragyna speciosa* grows, and where it is illegal, the government has had a change of heart and is planning to make it legal in order to treat addictions. I have been unable to locate any reliable source of data for this claim. Also I have heard that the AUSTRALIAN THERAPEUTIC GOODS ADMINISTRATION (their version of the FDA) is planning on placing the chemical mitragynine into their “Schedule 4.” This schedule would mean that the plant and dried herb are still legal, so long as they are not being consumed or sold for consumption (SHAMAN AUSTRALIS 2003). Frankly, it is mind-boggling that a government agency in Australia has set its sights on this chemical, which may not even be psychoactive in humans, which has never been available in pure form to the masses, and hence which can not reasonably be considered a “drug of abuse” in any realistic sense. As well, it has been reported that the MALAYSIAN NATIONAL NARCOTICS AGENCY engaged a botanist last year to conduct a study to determine if *kratom* should be classified there as a dangerous drug (YAHYA 2002).

I would like to thank all of the vendors and individuals who supplied me with leaf material for analysis, including SHAMAN AUSTRALIS, NATIVE HABITAT, THE BASEMENT SHAMAN, HERBAL-SHAMAN, B.K. & RICK, CRAIG, and PURE LAND ETHNOBOTANICALS. Thanks also to DENNIS MCKENNA and SASHA SHULGIN for their help with this project, to MJB BOTANICALS for providing material and sharing their test results, to WILL BEIFUSS who supplied initial funds to purchase the second reference standard and shared material for testing, and many thanks to DANIEL SIEBERT for bringing this scam to my attention in the first place, for providing material for testing, and for sharing his test results. ☉



ERRATA AND ADDENDUM

REGARDING THE ARTICLE “Bogus *Kratom* Market Exposed” on pages 26–28. Since this was written, BRUNO PHILLIPS has finally responded to the data about this scam that was posted at the SHAMAN AUSTRALIS web page URL <http://www.shaman-australis.com/Website/Shamanmainpageframeset.htm> PHILLIPS claims that *he* was the victim in this scam, and states that he never charged more than \$200.00 a kilo for the bogus herb, although he also says that his “partner sold the herb as he wanted” so perhaps this is where the higher prices that were reported came from. PHILLIPS web page no longer lists the *kratom* as being available, although it *did* still list it as available when the article was written a couple of weeks ago, well after he knew that the herb as mis-identified. Based on the chronology of events, it would appear as though he only took this offering off of his web page after the scam was exposed at the SHAMAN AUSTRALIS site. PHILLIPS has also mentioned a single wholesaler to whom he refunded money, making it sound as though he does plan to offer refunds to those who were sold bad product. If true, this is great—although we would suggest that he should *automatically* send a refund payment immediately to everyone that he sold this herb to. We encourage any botanical supplier who has purchased the bogus *kratom* recently from PHILLIPS to demand a refund, and we also encourage any individuals who have purchased bogus *kratom* recently from retailers to demand refunds.

Another correction to this article is due: it turns out that Australia *does* plan to ban the plant *Mitragyna speciosa*, as well as the chemical mitragynine (mentioned in the article).

Finally, qualitative testing (comparison to a pure reference standard of mitragynine picrate) done by DANIEL SIEBERT recently revealed that the dried *kratom* leaf offered by PURE LAND ETHNOBOTANICALS [2701 University Avenue, PMB 463, Madison, WI 53705-3700, info@ethnobotanicals.com, <http://www.ethnobotanicals.com>] is *indeed* correctly identified. This company appears to currently be the sole source for imported dried leaf. •