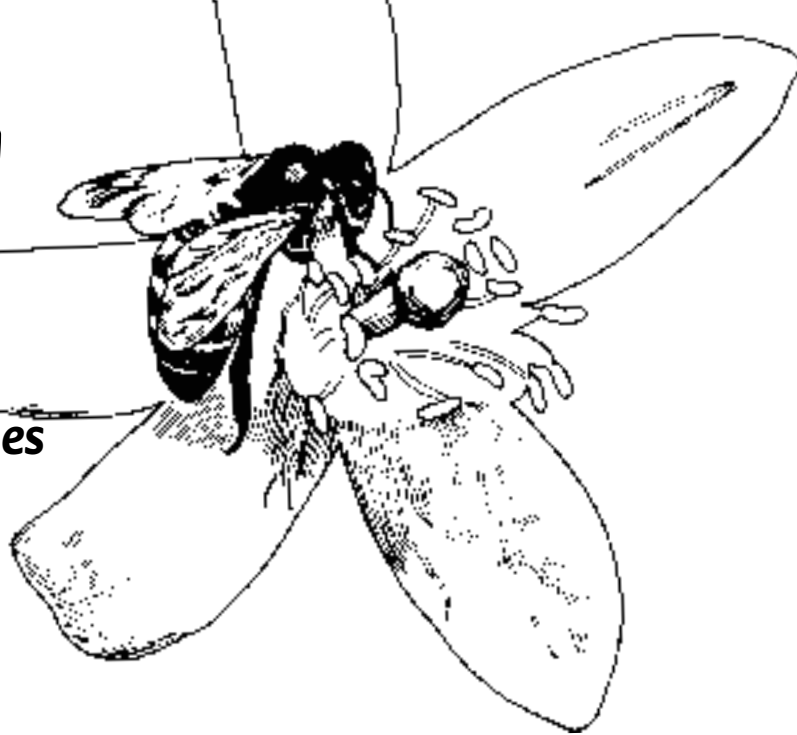


APIS



Apicultural Information and Issues

From IFAS/University of Florida

Department of Entomology and Nematology

July 1999

Inside APIS:

The 'Old' Beekeeping Literature

Overreliance on new information resources is not a good strategy. *Page 1.*

Y2K

Implications for beekeeping because of the millennium bug. When computers can't resolve the date 2000. *Page 2.*

New-Millennium Trade

This main issue impacts beekeepers and agriculturists in all countries. *Page 3.*

British Bee Journal

It's the end of an era. *Page 3.*

The Value of Drones

Male bees might be more important than you think. *Page 4.*

APIS Volume 17, Number 7

ISSN 0889-3764

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The 'Old' Beekeeping Literature: Overreliance on the New

A COLLEAGUE recently lamented that no one seems interested in the old beekeeping literature anymore. Its use, he said, seems to have been replaced by a reliance on the "new," primarily driven by electronic technology. The information superhighway is so powerful that it can sometimes cause us to become complacent, believing that all there is to know must be at our fingertips. I have also been guilty of this over reliance on the new. It is so easy to acquire information on the net that going to the library or other sources seems much more difficult than it did originally. My colleague characterized such behavior as "lazy." I would prefer a kindler, gentler term, but the essence of the comments appear to be on the mark.

As a pioneer in electronic information technology, I analyzed the genesis of the phenomenon in the October 1996 *APIS*, and what this might mean for apiculture extension activities¹. At first glance the issue seems to boil down to two words: relevance and accessibility. Unfortunately, the "old" literature often falls short in both categories. New technologies (hive materials, feed, transportation) and environmental conditions (plants, weather, pests) have affected beekeeping in many ways that older literature does not describe. Although the old literature continues to be valuable in characterizing the nuts and bolts of honey bee biology and management, it was and still is not very accessible to the average beekeeper. To find this information, one had to visit scientific libraries. Some of it made its way into the journals and newsletters, but much did not. Although not readily accessible, however, this does not mean that the older literature lacked relevance.

If one spends much time reading routine messages on Internet discussion lists, or like this author, receives questions by electronic mail, it's easy to see reliance on the new. Clearly many persons use the electronic medium as their only information source. Since a lot of these are new beekeepers, it seems natural to gravitate to this new method. However, there is a huge amount of good data that is not available through this medium. And it will be a long, long time, if ever, before literally hundreds of years of research and observations about one of humanity's oldest agricultural endeavors are available online.

In the final analysis, it may not be accurate to characterize the situation as one of either-or. Much good current and older information on beekeeping, for example, is found in the trade journals (*The Speedy Bee*, *American Bee Journal* and *Bee Culture* in the United States, and tens of magazines and newsletters

Continued next page

Y2K: Implications for Beekeeping

ARE YOU prepared for the “millennium bug”? A computer bug is a built-in element that results in either hardware or software not working. Most bugs are mistakes and usually corrected when found. However, some are intentional workarounds that are not expected to cause significant problems.

A bug built into many computers and software programs that rely on dates is that they cannot recognize the turn of the century, known in shorthand as Y (year) 2K (2000). The bug was deliberately put in place when programmers developed software for older computer technology that did not have the capacity to read a four-digit year date. The assumption was made that the first two digits (19) could be dropped from all dates and only the last two were necessary, an excellent strategy for 1901 to 1999. It was equally assumed that most of the applications using this dating technique would be outdated and replaced by the time year 2000 rolled around and the bug revealed itself. This did not happen. What did take place is something few of these early programmers envisioned. Many of these hardware and software entities have been tied together into complex networks that rely on each other in order to function. If one link (perhaps a single chip in some hardware or a snippet of software code) doesn't function because it can't read the date correctly, the whole network could be brought to a standstill.

Computer technology is responsible for many modern life-giving technologies, including running water and electrical power. Most of the agencies responsible for these have emergency backup plans. They go into effect in case of natural disasters, like snowstorms, earthquakes and hurricanes. Usually, even at their worst, these are only regional in scope, however, and resources from unaffected areas can be brought in temporarily to provide assistance. This was true in recent ice storms, for example, when crews from Florida were called to help with downed lines in northeastern North America. What happens, however, if the whole United States, even North America, should lose the power grid because of an unanticipated millennium bug? How long would it take authorities to find the problem and repair it? What would a widespread power outage mean for society as a whole? These are the unknowns

driving major efforts everywhere to fix the millennium bug before it shows itself on January 1, 2000.

Beyond the power grid, computer technology is also responsible for much of the smooth-running society we have today based on a principal originally developed in Japan: “just-in-time delivery.” This philosophy is responsible for everything from overnight shipping (Federal Express®) to the food we eat (prewashed and cut lettuce in plastic bags). It allows greater efficiency because storage of goods is minimized. Cooperative Extension has also been influenced by this. Whole libraries of printed publications that used to be stored and were susceptible to becoming quickly out of date are now available “on demand” using modern copying technology. The downside of this, however, is that if something goes wrong with on-time delivery, there are few or no alternatives to remedy the results of such a failure.

WHOLE BOOKS have been written about possible effects of the year 2000 bug, and there will undoubtedly be more coverage through the last quarter of the year. The possibility of things going wrong is almost unlimited—the most frightening aspect of the situation. Worst-case scenarios call for shortages of banking services, food, power and water distribution over wide areas, finally resulting in a breakdown of social order. Although some have said the problem is overblown, the fact that both the U.S. Congress and President have approved a bill to protect companies for Y2K-related law-

suits suggests it is being taken seriously at the highest levels.

In the face of this situation, what is the beekeeper to do? Fortunately, most of the craft does not depend on computers. However, the majority of logistics relating to beekeeping practice relies on information technology. The best advice is to keep informed about the issue and have permanent records of financial transactions and important documents printed on paper so that if electronic data is compromised, this is not lost. Also check with your suppliers to ensure they have at least considered the problem. Latest statistics indicate maybe as many as 40 percent of small businesses have not. Most authorities are suggesting that one prepare for this as for any possible emergency, such as a hurricane in Florida. This includes a full tank of gas, cash in small-denomination bills, and a stash of emergency food and water. In the process, don't forget the bees. Of special significance should be ensuring that a supply of sugar for emergency feeding and Varroa treatment materials are on hand.

Ironically, the computer continues to be perhaps the best source of information about the millennium bug. There are a number of World Wide Web sites dealing with the phenomenon³, as well as *Y2K News Magazine*, a bi-weekly magazine⁴. The Institute of Food and Agricultural Sciences at the University of Florida is also informing its staff and clients in agriculture about the problem⁵. Microsoft Corporation will mail out its free Year 2000 Resource CD-ROM to those calling toll-free 888-MSFT-Y2K. ■

Old/New Continued

in other countries). How new or old this information might be is a matter of conjecture. Some of these publications have been around since before the turn of the twentieth century. If one examines many so-called “new ideas” developed in the contemporary beekeeping environment, these have, more often than not, already been described in the older literature. On the other hand, the quality and quantity of information found on the World Wide Web never ceases to amaze. This is the genesis

of my column in *Bee Culture*, “Beekeeping in the Digital Age.”² Both old and new information resources, therefore, have much to offer. It is a mistake to rely on one at the expense of the other.

The newer technology, though, takes one beyond the conventional debate centered on either the age or quality of the information itself. It portends something most have yet to fully realize: Not only will it be responsible for **what** we know, but **how** we know it. ■

Trade: The Issue of the New Millennium

I RECENTLY saw the movie “The Phantom Menace.” Embedded in all the hype about George Lucas’s futuristic visions of the human condition was something lost on many reviewers. The goings on had the characteristics of a good old-fashioned trade war.

Trade is on the minds of agriculturalists as the new millennium approaches. Mr. Carl Loop, president of the Florida Farm Bureau Federation, discusses the situation in the July 1999 edition of *Florida Agriculture* (Vol. 59, No. 7, p. 2) in view of the upcoming Seattle World Trade Organization negotiations. He says Florida agriculture needs the opportunity to negotiate specific treatment for specific crops, and not rely on one-size-fits-all. Fruit and vegetable producers have self-imposed fees for development of domestic markets, but these have also made them more attractive to importers.

The same is true of the beekeeping industry. The current debate about how effective are assessment dollars put into National Honey Board programs focuses much attention on whether domestic honey promotion simply creates a more favorable environment for honey importation. Some beekeepers would rather put money into antidumping efforts shown to have been particularly effective in the Chinese situation⁶.

The April 1999 *Speedy Bee* (Vol. 28, No. 4, p. 1) reports that both the American Beekeeping Federation and American Honey Producers Association are employing attorneys to undertake a study of Argentinian honey pricing. That country exported 27.6 million pounds of honey in 1995, but the amount escalated to 107.1 million in 1997. Although imports from Argentina dropped to 69.1 million pounds in 1998, import prices continued to drop, suggesting an unfair governmental subsidy of the Argentinian honey industry. I reported on other aspects of the Argentinian beekeeping situation in the September 1998 *APIS*⁷.

The cost of regulation also makes Florida agriculture less competitive, according to Mr. Loop. By some estimates a third of all fresh fruit and vegetable production costs are regulatory in nature. The assumption that these costs will be passed on to the consumer is a fallacy as reported in the April 1999 *APIS*⁸. We have watched,

Mr. Loop says, as NAFTA (North American Free Trade Agreement) and the ensuing Mexican peso devaluation, the Asian economic collapse, and other aspects of the world economy affect purchases by our trading partners. I reported that the NAFTA agreement might be more beneficial than harmful to U.S. beekeeping in the November 1992 *APIS*⁹.

In summary, trade is a two-way street, Mr. Loop says. “We don’t need to sacrifice our domestic markets to gain access to foreign markets. Our producers need effective dispute-resolution processes. With import-sensitive crops, when regulatory cost is considered, our producers are least-cost producers. As we talk about

market development, there is a need to recognize the domestic market as one that has been developed by domestic growers, and they need access to that market.” These remarks are interesting to contemplate in light of those by Dr. Steven Blank in his book *The End of Agriculture in the American Portfolio*, as reported in the April 1999 *APIS*¹⁰. The debate about the future of agriculture in conjunction with trade policy will not, like old soldiers, fade away any time soon. No matter how the fortunes of U.S. agriculture play out into the next century, however, it is likely that Mr. Lucas will be shown to have been remarkably prescient when he used trade as the linchpin for his Star Wars epic. ■

British Bee Journal: End of an Era

IT MAY be surprising to some that there are so many British bee journals. Now there is one fewer. The publishers of *The British Bee Journal*, Cecil and Nora Tonsley, are ending their business (British Bee Publications, LTD) and with it a “remarkable publishing venture,” according to Mr. Karl Showler (*The Beekeepers Quarterly*, No. 56, February 1999, pp. 27–30). It turns out this is not just one journal among many, but one continually published from 1873 to 1999. Ceasing this effort is tantamount to Dadant and Sons or A.I. Root abandoning publication of *American Bee Journal* or *Bee Culture* respectively.

Mr. Showler’s account of the often-turbulent history of the *British Bee Journal* is detailed and comprehensive. The first edition appeared May 1, 1837, published by a “dynamic ex-butcher — Charles Nash Abbot.” *The Journal* was the nucleus around which the British Beekeepers Association (BBKA) grew. This organization is now celebrating its 125th year¹¹. The Golden Years of *The Journal* were under

the leadership of Thomas Cowan, who journeyed throughout Europe and North America. “Long years of argument” began when the *Irish Bee Journal* was published in 1901, rivaling *The British Bee Journal*’s preeminence. *Bee Craft* was launched in 1919. The Apis club began distributing *Bee World*. The *Welsh Beekeeper* (1923), followed quickly by the *Scottish Beekeeper* (1924), served those countries. Other publications included *Better Beekeeping*, *Beekeeping*, and *The Beekeepers Record*, *The Journal*’s stablemate, each seeking to establish itself as the official information organ of the many beekeeping groups in the country.

The Record and *The Journal* were consolidated under the editorship of the Tonsleys just after World War II. Cecil traveled to every honey-producing country. He was active not only in the BBKA, but also with Apimondia. Later, according to Mr. Showler, “*The Journal*’s editor could look back over the years to almost mythical times when sugar was rationed and there

¹ <http://www.ifas.ufl.edu/~mts/apishtm/apis96/apoct96.htm#2>

² <http://bee.airoot.com/beeculture/digital/>

³ <http://www.year2000.com/>

⁴ <http://www.y2knews.com/y2k/problem.htm>

⁵ <http://www.ifas.ufl.edu/y2k/>

⁶ <http://www.ifas.ufl.edu/~mts/apishtm/papers/PORTLAND.HTM#17>

⁷ <http://www.ifas.ufl.edu/~mts/apishtm/apis98/apsep98.htm#4>

⁸ <http://www.ifas.ufl.edu/~mts/apishtm/apis99/apapr99.htm#2>

⁹ <http://www.ifas.ufl.edu/~mts/apishtm/apis92/apnov92.htm#6>

¹⁰ <http://www.ifas.ufl.edu/~mts/apishtm/apis99/apapr99.htm#2>

¹¹ <http://www.bbka.demon.co.uk/index.htm>

were beekeeping instructors in every rural county." He concludes it will be difficult to imagine British beekeeping without Cecil and Nora.

Although *The Journal* is gone, there still exist excellent published resources produced in Britain. Most know about those of the International Bee Research Association (IBRA). These include *Apicultural Abstracts*, *The Journal of Apicultural Research*, and *Bee World*¹².

Mr. Jeremy Burbidge has been kind enough to forward to me numbers 56 and 57 of *The Beekeepers Quarterly*, published by Northern Bee Books, Scout Bottom Farm, Mytholmroyd, Hebden Bridge, West Yorks HX7 5JS. He also publishes *BEE BIZ*, first published in 1995 and dedicated to commercial beekeeping¹³. *The Quarterly* is jam-packed with letters to the editor and articles such as the one described above about the history of the *British Bee Journal*. My favorite section, however, is the one where various correspondents report on their beekeeping activities. In issue 56, for example, we learn about the Bongong moth in Australia, which leaves an odor on flowers that repels bees, the lack of rain that may result in a shortage of 2,000 tons of honey for New South Wales, and the disastrous fire that burned the supply house "Penders" in Maitland, destroying many archived historical items about Australian beekeeping. Reports from Canada (a hive producing 595 pounds of honey), Cyprus, Brittany, Romania (two-queen colony management), the Netherlands, Poland, the Czech Republic, Italy, Spain, the Ukraine, and Ireland round out the number.

Issue 57 includes reports from Brazil (collecting propolis), Germany and Rus-

sia. It also has features about the apitherapy conference in Slovenia and an in-depth discussion of microscopy for beekeepers I have not found elsewhere. This emphasizes again that much valuable information exists in print and cannot be found in alternative media such as the Internet. Although

foreign in nature, however, *The Quarterly* and its cousin *Bee Biz* have a lot going for them, including the fact that they are written in English. Fortunately, the publisher is making them both available for a package price of 25 English pounds (1.6 English pounds = about \$1 US). ■

Value of Drones: The Male Bee Will Out

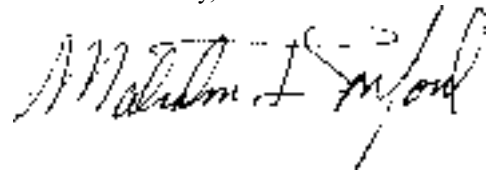
STEVE TABER in numbers 56 (February 1999) and 57 (Spring 1999) of *The Beekeepers Quarterly* discusses drones. He begins by admitting we don't know much about the male bee, except they buzz loudly and don't sting. The first thing he learned about drones was from talking to Mr. Roy Weaver, who comes from a long line of queen producers: It is impossible to raise mated queens without drones. Later, Mr. Taber found himself able to rear drones year-round, provided he fed colonies large amounts of pollen in a mild climate (Arizona). An outgrowth of that was the concept that all pollen was not useful in rearing drones. Desert pollen, coming from native American (desert) plants, didn't do the job. Only when it was supplemented with pollen from Wisconsin populated by introduced European plants was this possible.

Most beekeepers don't like drones, according to Mr. Taber. Many rip out drone brood when they see it in their hives. But the presence or absence of drones is a sensitive indication of what's going on in a colony of honey bees. Drones are a dynamic protein bank, Mr. Taber says, that can be drawn on by a colony in time of need. Males, therefore, are considered an indicator of sufficient food supply except

under two conditions: As winter approaches, the males are ejected from the colony (in places where there is no winter all bets are off). The other situation, according to Mr. Taber, is when a colony has been queenless for a time or has laying workers. My own experience here differs. I have seen many failing colonies filled with drones and only drone brood.

In this era of Varroa mites, drones have taken on a new role, Mr. Taber concludes. First, they can be used to detect the mite. One reason for this is that Varroa prefers drones and so most likely will be found in that brood. As a corollary, drones can be used to capture mites. Many beekeepers in areas like Vietnam where there are no resources to treat Varroa actively use this technique. They simply allow areas of comb to be populated by drone brood, which attracts the mites. Then this brood is discarded. In the process, the beekeeper rids the colony of excess mouths to feed (males) and Varroa mites in the bargain. ■

Sincerely,



¹² <http://www.cardiff.ac.uk/ibra/index.html>

¹³ <http://www.beekeeping.com/bee-biz/>

APIS, a monthly newsletter, is celebrating its 17th year of service to beekeepers. For subscription or other information, please write, phone, fax or e-mail.

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