

Open Access¹ to the Web Version of *Florida Entomologist*

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Background

In 1994, the Florida Entomological Society (FES) began making the PDF files of all articles in *Florida Entomologist* freely Internet accessible on the server of the Florida Center for Library Automation (FCLA). It did not charge extra for this new service and continued to provide it for the next six years without an increase in publication fees. In 2001, FES began charging its authors an obligatory Immediate Free Web Access (IFWA) fee of \$100 for an article and \$50 for a scientific note. In 2002, to increase the exposure of *Florida Entomologist* articles to potential users, it started making advanced HTML versions and PDF files freely accessible on *BioOne*, a web-based aggregator of society-published bioscience journals which sells electronic access to its aggregation of more than 60 journals. Because *Florida Entomologist* is open access, FES foregoes royalties it would otherwise collect. FES continues to post the PDF files of the complete contents of *Florida Entomologist* issues on the FCLA server.

Fiscal considerations

Even though all articles were freely accessible on the Internet from 1994 on, numbers of institutional subscriptions declined only 10% until 2003 (Fig. 1). Similarly the gross revenues from subscriptions changed little during the same period, although a subscription price increase from \$40 to \$50 in 1999 was required to compensate for the effects of inflation. The decline in subscriptions should not necessarily be attributed to FES's embrace of open access. None of the four principal journals of the Entomological Society of America are open access, yet institutional subscriptions to these have declined more than to the *Florida Entomologist* (Fig. 1).

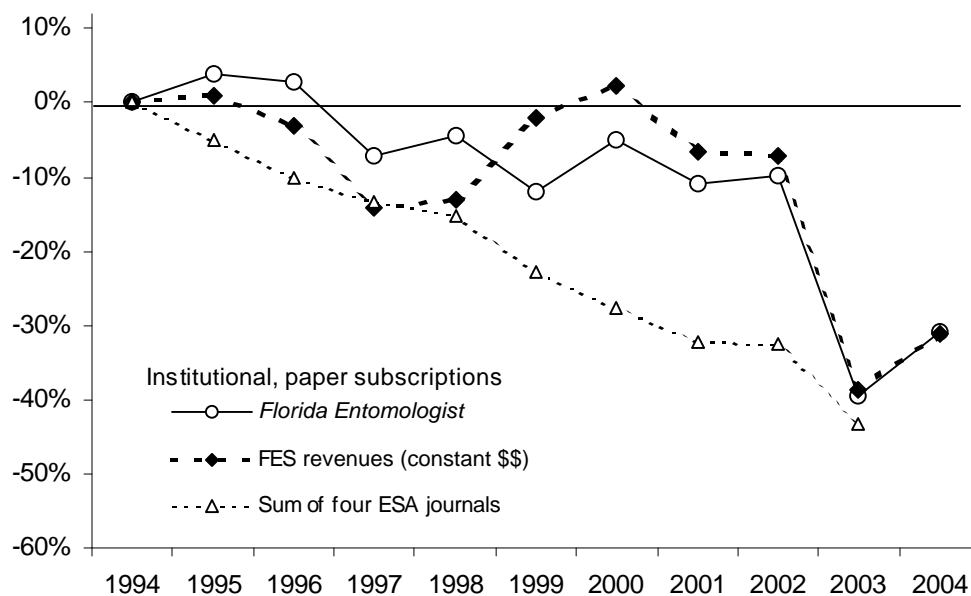


Fig. 1. Changes in the numbers of institutional subscriptions to *Florida Entomologist* and the gross revenues from them, from the start of open access in 1994. Changes in the total subscriptions to the print versions of journals of the Entomological Society of America are shown for comparison. In 1994, the three items whose changes are charted had values of 185, \$7400 (in 1994 dollars), and 3394.

¹“Open access” has become the most widely used term for immediate, unrestricted, web access to journal articles.

The enhanced HTML version, required for *BioOne* posting, increased the per-page cost of the digital versions of *Florida Entomologist* from \$3.15 to \$5.85. However, as can be seen in Fig. 2, net revenues from IFWA fees have been adequate to replace declining gross revenues from institutional subscriptions. It should be noted that much of the decline in these revenues from 1994 to 2004 was due to inflation. Had no change in the dollar's purchasing power occurred, the decline would have been 13.5% rather than 31%.

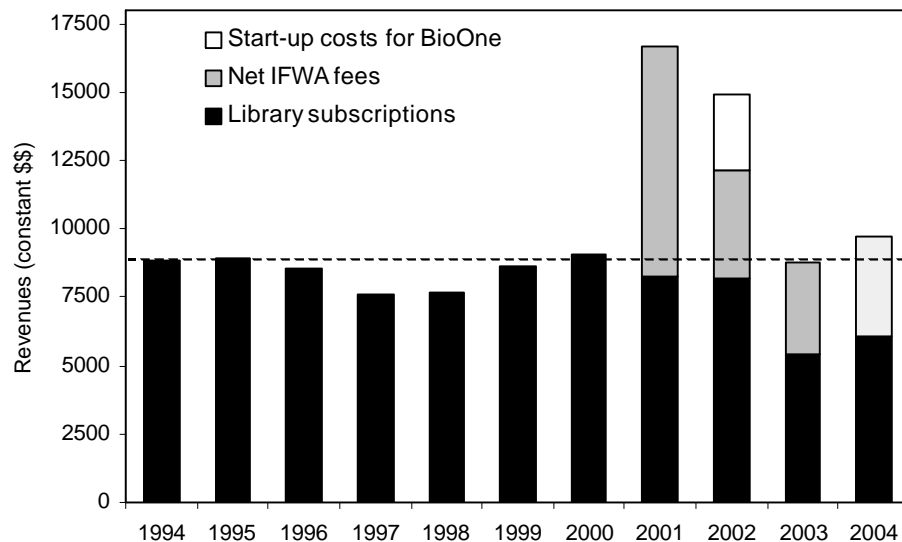


Fig 2. Gross revenues from library subscriptions and net revenues from IFWA fees (in constant 2001 US\$). In 2002, net IFWA fees were reduced by the start-up costs for *BioOne*. The net IFWA fees shown for 2004 (stippled area) are an estimate that assumes that IFWA revenues will equal the average for 2002-03. The dashed line allows easy comparison of library-subscription revenues of later years with those of 1994.

The precipitous decline in library subscriptions in 2003 (Fig. 1) may have been a result of *Florida Entomologist* appearing on *BioOne*. Libraries that subscribed to *BioOne* may have come to view their subscriptions to *Florida Entomologist* as an unnecessary duplication. The rebound in subscription numbers in 2004 may indicate that the patrons of some libraries that canceled complained about the missing paper issues of *Florida Entomologist*.

Usage considerations

Because articles in *Florida Entomologist* are open access, web search services index them. *Google*, for example, indexes each article twice--once for its occurrence on the FCLA server and again for its occurrence on the *BioOne* server. Furthermore, the articles are indexed by *BioOne* (along with the articles of the other 68 journals *BioOne* hosts), making it possible for the articles to appear in searches of *BioOne* by the patrons of the more than 1,000 libraries that subscribe.

Increased exposure should increase the numbers of persons who discover and read *Florida Entomologist* articles. Usage reports from *BioOne* and FCLA are an indication that the increase is large. For example, during March 2004, when 160 *Florida Entomologist* articles and scientific notes were on *BioOne*, downloads from *BioOne* averaged 32.7 per item for HTML versions and 4.4 for PDF files. During the same period, for the same 160 items, FCLA downloads of PDF files were 2.3 per item. Thus full-text files of the average item were downloaded a total of 39.4 times during March 2004.

Membership considerations

In 1994, when the FES Executive Committee decided to make the *Florida Entomologist* freely accessible on the Internet, it removed one of the incentives for becoming or remaining an FES member. Until then, the usual way to gain ready access to the *Florida Entomologist* was to join the Society.

During the initial years of open access to *Florida Entomologist*, no records were kept of annual numbers of FES members; however, Internet use during 1994-1997 was relatively low and the hardware and software that facilitated it were relatively primitive. Thus Fig. 3, with its origin in 1998, seems likely to capture any trends in FES membership that result from free Internet access to *Florida Entomologist*.

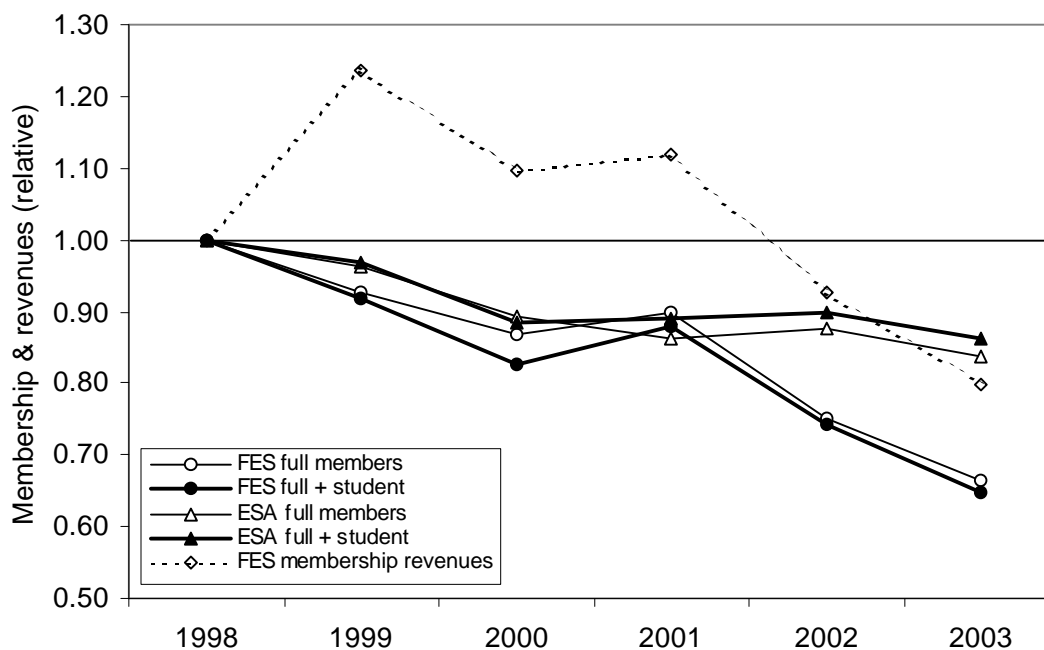


Fig. 3. Membership in the Florida Entomological Society and the Entomological Society of America, 1998-2003 and FES membership revenues. In 1998, the absolute values for the five items whose changes are charted were 386, 453, 5076, 6400, \$12,250 (in the order in which the items are listed in the legend to the figure). FES membership revenues for 1999-2003 were converted to constant 1998 dollars before comparing them with those for 1998

Since 1998, FES membership has declined about 35% (Fig. 3). In comparison, membership in the Entomological Society of America has declined 14%. One way to account for the divergence in membership trends for these two societies is to point to the increased reliance on the web for access to journal articles combined with restricted access to ESA journals and open access to the FES journal.

Summary

Open access greatly increases usage of *Florida Entomologist* articles. The web version of *Florida Entomologist* is currently paying its way through obligatory open-access fees. Numbers of library subscriptions and members are declining.