



Book and Software Reviews

Pocket Observer 2.0. By Noldus Information Technology. Costerweg 5, P.O. Box 268, 6700 AG Wageningen, The Netherlands, <http://www.noldus.com>. Price depends on institution type.

Pocket Observer is a program designed to allow researchers to collect observational behavioural data in the field, when it may not be convenient to use a PC or a laptop. This mobile system is based upon a package offered through Noldus called The Observer Mobile, which includes The Observer Basic software for PC, event recording software for hand-held devices ('Pocket Observer'), and a hand-held computer. Pocket Observer is now compatible with several units, including the Compaq iPAQ 3800 and 3900 series, the HP iPAQ h1930, h1935, h2200, h2210 models as well as both the Dell Axim X5 and the Panasonic Toughbook 01. All of these units are appropriate for indoor use, but some have limitations for outdoor use. In addition to Pocket Observer 2.0 software, the equipment and software used for the purpose of this review were The Observer Video-Pro 5.0 for the PC and a Compaq iPAQ 3955 hand-held computer, with docking/charging cradle, cables and software accessories.

Pocket Observer allows for behavioural recording in some field conditions, but has several limitations depending upon the unit on which the software is loaded. The largest limitation on taking the unit that we reviewed into the field is its temperature specifications, with an operating range of 0–40°C. Our research takes place in South African winter and the Canadian Arctic, both climates going below 0°C, so our test of this device was limited. High humidity is also a problem, thus we could not test the device outside here in Florida. A ruggedized case for the iPAQ is available, but even with this case we could not test this unit because of our field climates. There are alternative field solutions, including a much harder unit that will be compatible with the Pocket Observer software. This new unit, the Panasonic Toughbook 01, can be used in much more variable climates than the iPAQ and can go as low as –28°C, with a corresponding price tag. This unit was unavailable to us for a field test, but will be available soon for purchase. The Observer Mobile is also available with a Support Package for the Psion Workabout MX. This unit can be used in challenging environments; it resists drops of 1 m, is splashproof, withstands a relative humidity of 95% and the operating temperature ranges from –20 to +60°C. However, the Psion has a non-Windows operating system.

The Pocket Observer software and small hand-held computer offer a solution to researchers who cannot carry

around large PCs or video cameras to collect their data. The system allows the collection of data to occur without subjects being constantly aware of being videotaped, possibly diminishing subject bias. Pocket Observer can have up to 250 subjects and 100 behavioural classes, with up to 250 behaviours within each class. Any configuration files designed on The Observer for PC can be used in Pocket Observer, and it can save as many configurations as needed, allowing for interchangeable configuration files. This portable system is useful only for data collection. The design of the configuration file as well as any analyses of data must be done on the desktop PC with the appropriate The Observer software. The overall battery life of this hand-held computer is around 9–10 h, depending on temperature and humidity conditions.

One of the best features of this hand-held system is the Windows interface, which allows for easy navigation, data collection and file management. Modern PDAs have large storage space (32–64 MB), making it easy to store many observations before uploading them to a desktop unit. Pocket Observer automatically saves data to a backup file, in case of low or no battery power so that collected data are not lost.

Set-up was extremely easy both for the installation of Pocket Observer and installation of the iPAQ Pocket PC software on a desktop PC. The Compaq iPAQ Pocket PC was beautifully designed and easy to navigate. We found the small manual very helpful and informative; it was easy to read and demonstrated the basic functions. The manual for Pocket Observer was condensed but informative, with a Quick Start Guide chapter useful for those who are familiar with The Observer software, as well as detailed guidelines on building or creating a workspace, projects and a configuration file. This manual is meant only as a supplement to the manual for The Observer 5.0, and these manuals can be difficult to understand, requiring several readings to grasp some concepts.

Transferring and loading a configuration file from a desktop to the portable device is easy: click and drag the configuration file within its folder from the desktop to the file manager for the hand-held device on the PC, open The Observer, choose File, Load Configuration, and by choosing the appropriate file the configuration is loaded. Pocket Observer supports all three of the recording methods of The Observer 5.0: continuous (ability to collect duration and frequency), interval states (duration only) and interval events (frequency only). The colour screen with touch capabilities makes it easy to score data with a touch of the screen. With this unit, the user can acquire data using the embedded or physical keyboard, or use the pen-based touch screen interface and handwriting

recognition. The program offers several sound feedback functions to prevent mistakes, including the option to let the software speak out the name of each behaviour via the earphone. However, even with these features we found it very difficult to score using our ethogram. We have a complex configuration file, with several subjects and more than 60 behaviours, and many of those behaviours have one or two modifiers. The behaviours that we score are a mixture of events and states, including large movements as well as very fine movements. Since Pocket Observer software is designed specifically to collect live data, we found it nearly impossible to scroll through our list of behaviours and score accurately and precisely with our existing configuration file. We suggest that pen-based data entry is ideal only for ethograms with few subjects, behaviours and modifiers, because the more behaviours you need to score, the more difficult it is to scroll through the list to find the behaviour that you need. It is difficult to score complex behavioural interactions with this system, because the time needed to score the behaviour and two modifiers may result in missed behaviours that occurred while entering earlier data. We suggest with a complex ethogram that using a PDA with a physical keyboard would help solve this issue. Perhaps with more practice, we could become faster at collecting the data, but because we videotape our data, The Observer 5.0 on the PC allows us to score, and to pause or slow down our interactions. The PDA and Pocket Observer could be used to perform initial general coding of the behaviour in the field with the ability to fill in the details later from the video. After both the video recording and the observational data have been transferred to the PC, the synchronization function in The Observer Video-Pro can match the timelines of video and event log. The speed of the video can then be adjusted so that behaviours can be inserted during moments of complexity. Another alternative for live data collection using complex ethograms with many codes, is a Tablet PC. This device combines portability with a large screen display, and can be used to run The Observer Basic with the display specified to show all codes.

Once data have been collected and scored through Pocket Observer, it is necessary to upload these files into a desktop PC with The Observer Basic, or any other version that has been acquired. Files are easily transferred by clicking and dragging files into the appropriate folder on the desktop computer. Only then can reports and analyses be generated, because these functions are not available on the hand-held system.

If you are already familiar with The Observer, then learning to use this portable version is simple. However, if this program is new to you, expect a steep learning curve. You must have basic knowledge of the program and of how to build a workspace, and, most importantly, a simplified configuration file before being able to use this system. With these considerations in mind, and by choosing the appropriate hand-held device, the Pocket Observer software would be a useful tool for field biologists taking scan data, scientists who do not want their human subjects to know they are being observed, as

well as many other situations that allow for simplified ethograms.

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Sperm Whales: Social Evolution in the Ocean. By H. WHITEHEAD.
Chicago: University of Chicago Press (2003). Pp. xxiii+431.
Price \$30.00 paperback.

An entire book dedicated to a single species is an extravagance that is warranted if the animal is particularly interesting or impressive and is sufficiently well studied for there to be much to say about it. The sperm whale passes muster on both counts. As Whitehead points out in the first chapter, the sperm whale is the most extreme and spectacular of animals: the largest of the toothed whales, the most sexually dimorphic, with the lowest reproductive rate, it is among the most accomplished of mammalian divers exploiting a deep sea ecosystem of which we are still woefully ignorant. Sperm whales are also the most socially complex of the great whales and possessors of the largest brain there has ever been. The list of superlatives goes on but the point is made. Further, although some areas of this whale's biology remain intriguingly unknown, recent work, in particular that conducted by the author and his team, has provided sufficient new information on many aspects of the biology of this species to warrant a book at this time and to allow Whitehead to paint a rich picture of its life.

In addition to being biologically spectacular, the sperm whale has had long and varied interactions with humans, not only as a source of unique commodities (spermaceti was an essential lubricant in the space program, for example), but also as a cultural and spiritual symbol. Whitehead explores some of these issues in chapter 1 and returns to the subject of how human activities might impact this species at the end of the book, in chapter 9.

Intervening chapters focus on the animal's biology. With a lucid style, Whitehead takes us through their oceanic habit, movements, population parameters, behaviour and vocalizations, and social and cultural organization. Each chapter provides a good overview of existing knowledge, usually including full coverage of the author's group's own work. To those new to the field, this might seem a partial treatment, but in reality, it fairly reflects the group's dominance in this field. These chapters are particularly useful in that they coherently pull together much unpublished, or obscurely published, work. Good use is made of text boxes to diverge and explore an interesting avenue more fully, or to provide methodological detail on some previously unpublished data.

The sperm whale is a species that seems to have achieved great ecological success. Notwithstanding the