Running head:
Smith et al.: The running head is in sentence case (max. 80 characters or spaces)

Membership status:
Member (name, ID) or non-member

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**Precise title in sentence case, 12 pt bold font, with name of insect (Order: Family)—use either ESA-accepted common name or Latin binomial, not both, and do not include the authority for taxonomic names**

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**Abstract**

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Left-justify the word Abstract. Capitalize the first letter only. Do not indent the Abstract heading and the first line of the text. Do not cite references, figures, or tables in the abstract. Avoid long lists of methods or detailed explanations. Give the systematic authority at first mention of an organism's Latin name, order, and family in the abstract and the text. Spell out all authorities except Linnaeus (L.) and Fabricius (F.). The primary purpose of an abstract is to explain to the general reader why and how the research was done and why the results should be viewed as important. It briefly provides the (i) background and purpose, (ii) methods, (iii) results, (iv) conclusion(s), and (v) significance and impact as in the following example. (Note: The following **bold-font grey words in brackets** shown in this abstract are for guidance only; **do not insert these words** in your abstract.) **[Background and Purpose:]** The red palm weevil, *Rhynchophorus ferrugineus* (Olivier) (Coleoptera: Curculionidae), is an economically significant pest of palm trees. By the time a palm infested with weevils displays visible damage, larvae have destroyed much of the trunk's internal structure, typically resulting in tree mortality. Acoustic technology may enable pest managers to detect and treat early weevil infestations before tree mortality. This study was conducted to determine the detectability of sounds produced by early instars in open, urban environments and in enclosures with approximately 10 dB acoustical shielding. **[Methods:]** Recorded signals were analyzed to identify larval sound impulse bursts, trains of 7 to 200 impulses, 3 to 30 ms in duration, where impulses within the train were separated by less than 0.25 s. For a burst to be considered a larval sound, it was specified that most of its impulses must have spectra that match mean spectra (profiles) of known larval sound bursts more closely than profiles of background noise or known non-targeted sound sources.

**[Results:]** Larval bursts were detected in > 80% of palm fronds inoculated with neonates the previous day. There were no significant differences between burst rates in enclosed and open environments, but the shielding provided by the enclosure enabled detection of early instars from greater distances. **[Conclusions:]** Thus, there is potential to use acoustic technology to detect early red palm weevil infestation in either minimally shielded or open environments. In addition, because late-instar impulses ranged to higher amplitude and had greater diversity of spectral features than early-instar impulses, it may be possible to identify late-instar infestations based on the amplitudes and the diversity of sound features detected. **[Significance and Impact of the Study:]** Larvae of all instars can be detected over distances of at least 5 to 10 cm in shielded and exposed environments. In quiet environments it seems possible to detect early instars at distances up to 0.5 to1 m, whereas late instars can be detected at distances of 1 to 4 m. Step-wise procedures for identifying a weevil infestation in the field are elaborated."

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Key Words: type 4 to 6 key words **other than words in the title**; separate them with semicolons; do not type a period at the end

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**Resumen**

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Left-justify the word Resumen. If you have prepared a Spanish translation, place it here, otherwise leave it blank. Do not attempt a translation unless you (or your translator) are fluent in Spanish. The Spanish Abstract Associate Editor will provide a translation. A Portuguese translation (Resumo and Palavras Chave) is also accepted.

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Palabras Clave: type 4 to 6 palabras clave corresponding to those you listed in the Key Words

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This document is an example of the Florida Entomologist formatting style. Your submission should resemble the editorial style of this document. All submissions must be in Microsoft Word (.doc or .docx). Use continuous line numbering of lines on all pages of your manuscript. Type all text and captions (including text in tables) with double-spaced lines (except single-spaced contact information on top of the title page). Left-justify all text and indent (0.5 inches) all paragraphs. Do not use hyphenation on line endings. Use 12 pt font throughout manuscript. Do not use **bold font** except where absolutely necessary, such as to indicate the **surname (family name) of each author** on the title page and to indicate **sp. nov.** and. **gen. nov.** Use italic font only for scientific names (i.e., Latin binomials), certain statistical abbreviations (see below), mathematical equations, and 4th-level headings. The introduction should describe the paper's significance. Note that there is no heading for this section. State the reason for doing the research, the questions or hypotheses, and the essential background. Give the scientific name (i.e., Latin binomial), authority, and taxonomic classification (Order: Family) at first mention of each organism in both text and Abstract (or Summary). Authorship of a species name must be provided at first use. The year of authorship should be provided only in a synonymy or taxonomic resume, or if inclusion of the year is needed to clarify the use of the name. If the year is included, it becomes a citation and must be included in the References Cited section. After the first mention, abbreviate the genus name of the organism, unless it is at the beginning of a sentence (i.e., spell out an organism's genus name at the beginning of a sentence). Refer to the Catalogue of Life for accepted taxonomic placement (http://www.catalogueoflife.org/annual-checklist/2015/search/all). Use common names according to the listing of the Entomological Society of America (ESA). Do NOT use acronyms or abbreviations (like ECB for European corn borer). Plant cultivars follow the species name and authority, with capital initial letter, regular

font (NOT italics), in single quotation marks upon first mention; afterwards (unless confusion is possible), omit quotation marks when the cultivar is mentioned without the species name. Name plant viruses in accordance with Fauquet & Mayo (1999) Virology 144: 1249.

A sentence must not begin with an abbreviation or a numeral. In other words, spell out genus names, numbers, and abbreviated terms (or add an article before the abbreviated term) at the beginning of a sentence. Citations in the text are included in the name-date format: Jones (1986); (Jones 1986); Jones & Smith (1986); (Jones & Smith 1986); Jones (in press); (Jones AF, Department of Zoology, Ohio State University, personal communication). When 2 or more in-text citations are used, they must be separated with semicolons, for example "(Ball 1970; Menendez 1980; Jones & Smith 1986)." However, several citations by the same author(s) are separated by commas, such as "(Jones & Smith 1986, 1992, 2014)." List multiple citations in chronological order. Use "et al." for 3 or more authors, but do not italicize "et al." Provide evidence of acceptance for works "in press," otherwise cite as "unpublished" or "personal communication." Provide written permission from personal communicants.

The structure of taxonomic manuscripts is different from the structure of general research papers. Please refer to the Taxonomic Manuscripts Formatting Template (posted online: http://www.flaentsoc.org/auinstr.shtml) when preparing a taxonomic manuscript.

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**Materials and Methods** [12 pt bold font]

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Note that there is a blank line above and below the heading. Left-justify and indent (0.5 inches) all paragraphs. Report geographical coordinates as, for example, "Gainesville

(29.6513889°N, 82.3247222°W), Florida," providing up to 7 decimal places, and use the symbol for degrees (º)); note that there are no spaces except after the comma.

Use numerals (NOT words) to express whole and decimal numbers, for example "3 objectives, 8 samples, 4 times, 0.5 m." Exceptions: Spell out a number at the beginning of a sentence or title, a number adjacent to another number (e.g., "four 100 mL samples"), and zero and one when used generally (e.g., "values above zero," "at one time"). Use numerals to designate mathematical relationships as in "2:1 sex ratio (female: male), at 5× magnification, a 3-fold increase."

Use metric units unless there is specific reason to include English units, then include the English equivalents in parentheses. Do not abbreviate "liter" except in units of measure, such as mL and μL. For numerals with units of measure, use the symbols accepted by the Système International (SI). Separate mathematical operators and units of measure from numerals with one space (e.g., 3.7 ± 1.1 mm; $P = 0.05$), but do not leave a space between a numeral and % (e.g., 75%). For temperatures, insert a space before (but not after) the "degree" symbol (e.g., 27 ºC). Describe dimensions as "20 × 25 × 10 cm" or as "20 cm L × 25 cm W × 10 cm H." Do not use a hyphen between numerals and units when they specify a noun as in "a 7.4 mL glass vial" (NOT "a 7.4-mL glass vial"). Use regular (NOT superscript) formatting for ordinals as in "1st, 2nd, and 3rd instars." For more information on the use of numerals, ordinals, and units of measure, refer to the Scientific Style and Format of the Council of Science Editors (previously [until 2000] known as the Council of Biology Editors).

Use the following format for photoperiod: 14:10 h L:D. Spell out names of countries, states, and provinces, with the exception of USA. Report months using the 3-letter system (e.g., Jan, Feb, Mar), but in taxonomic reports use Roman numerals (e.g., 15-VI-2012). In dates, do

not place a zero before a numeral, use the 3-letter abbreviation (without period), und write the date in the order day-month-year, for example write 2 Apr 2010 (not 02 Apr 2010, not 2 April 2010, not April 2, 2010, and not Apr 2, 2010). For other abbreviations, refer to the Scientific Style and Format of the Council of Science Editors.

The study design must be clear so the statistical analysis can be understood. The reader should be able to determine where the study plots were located, how sampling was performed in space and time, what data were collected, what parameters were calculated, and how data were analyzed. With complex studies, it may be appropriate to divide the methods into separate units identified by subheadings, and then continue the subheading organization in the Results section. Large-scale datasets, sequences, and computational models should be deposited in one of the relevant public databases (e.g., GenBank of the National Center for Biotechnology Information [NCBI]) **before submission**, and authors should include accession codes in the Materials and Methods section. Alternatively, material can be included as "supplementary material," which is submitted as a Microsoft Word document and published online in pdf format, via an "infolink" associated with the online version of the manuscript. Supplementary material may include tables, graphics, color photographs, videos, etc. The corresponding author must alert the editor in chief about the need to upload supplementary material **before** the manuscript has been sent to the printing company. Please refer to the instructions posted online (http://www.flaentsoc.org/infolink.shtml) to prepare supplementary material.

Statistical analyses must be described in detail. Cite the method or software used. In regressions, specify the model, define all variables, and provide estimates of variance. Use uppercase "N" for population size and lowercase "n" for sample size. Following is an example of suitable description: "Within each experiment, treatment effects were analyzed by using repeated

measures ANOVA ($P < 0.05$) over multiple dates, and differences between treatment means were distinguished with the least-square differences (LSD) test (SAS Version 9.1, SAS Institute, Cary, North Carolina, USA). Percentage data (mortality) were arcsine transformed and numerical data (insect abundance) were square-root transformed prior to analyses. Non-transformed means are presented in the figures."

Under Materials and Methods, use **up to 3 additional levels of heading** with the following formats:

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EXPERIMENTAL LOCATIONS [2nd-level heading, all capital letters]

[BLANK LINE]

Text begins with indent. Leave one blank line above and below heading.

[BLANK LINE]

Spring Sampling Period for Immatures [3rd-level heading; capitalize first letter of major words; do not capitalize first letter of an article, conjunction, preposition, or pronoun]

[BLANK LINE]

Text begins with indent. Leave one blank line above and below heading.

*Sampling Terminal Leaves*. This 4th-level heading is indented and italicized; it is followed immediately by the text. Do not insert a blank line above this heading.

[BLANK LINE]

**Results** [12 pt bold font]

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Leave a blank line above and below the heading. Indent (0.5 inches) all paragraphs. Results generally should be stated concisely and without interpretation. However, with complex

studies, modest interpretation of individual parts can provide context helpful for understanding subsequent parts. **Keep the Results section and the Discussion section separate**. The editor of the Florida Entomologist **will not accept** manuscripts with a combined Results and Discussion section.

When presenting the results of analysis of variance or *t*-tests, specify *F* or *t*, degrees of freedom (df), and probability level (*P*) either in the text or table (e.g., $F = 19.76$; df = 1,28; $P < 0.001$). **Note that *t, F,* and *P* are italicized, but df is not.** An example for reporting regression is "The time required to complete larval development was related to air temperature ($t = 3.15$; df = 14; $P < 0.001$). Larval development time (days) decreased with increasing air temperature by the relation: days = $3.2 - (5.6 \pm 1.2$ [SD]) (ºC).

Under Results, use up to 3 additional levels of heading, as described above under Materials and Methods. Number tables and figures with Arabic numerals in the order in which you cite them in the text. In running text, refer to Table 1 or Figure 2. In parentheses, refer to (Table 1; Fig. 2). When you prepare tables, summarize your data (i.e., do not present raw data) so that each table fits on a regular page. See an example on Page 15 of this document. When you prepare figures, combine individual photos into a photo plate, and combine similar graphs into one figure plate. Printing of color photos is much more expensive than printing of black-and-white photos or line drawings, so it is in your interest to group color photos on separate plate(s).

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**Discussion** [12 pt bold font]

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Leave a blank line above and below the heading. Indent (0.5 inches) all paragraphs. The discussion should explain the significance and impact of the results. The objectives of the

discussion include (1) interpreting the results, especially in relation to the literature, (2) connecting the results to the objectives or hypotheses stated in the introduction, and (3) reflecting on the importance of the results. Avoid excessive repetition of the results.

Under Discussion, headings may be inserted as needed.

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**Acknowledgments** [12 pt bold font]

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Leave a blank line above and below the heading. Indent (0.5 inches) this paragraph. Do not use titles before names. Generally, people precede grants. Spell out institutions. You may include disclaimers such as "mention of trade names does not imply recommendation or endorsement."

[BLANK LINE]

**References Cited** [12 pt bold font]

[BLANK LINE]

Leave a blank line above and below the heading. Use a **hanging indent** (0.5 inches) as shown in the examples below. Begin each reference on a new line (without a blank line). Put initials of each author after the surname (family name) (e.g., Jones BJ, Smith CA. 2008.). Do not use punctuation except for a comma to separate names of different authors. Do not include "and" preceding the last name in a series. Include all references cited in the manuscript. Provide all information that would allow retrieval of the material including the volume and page numbers of a journal or the name and location of a book publisher. Spell out journal names (e.g., Journal of Economic Entomology). The journal name is followed by the volume number, a colon, and the page range; place an en dash between page numbers and a period at the end; for example

"Florida Entomologist 84: 111–115." Use sentence case for titles of journal articles, book chapters, reports, and theses. Capitalize major words (but not articles, conjunctions, prepositions, and pronouns) in book titles. Follow the grammar and spelling rules of foreign languages if you are citing original articles (e.g., in German titles, adjectives and adverbs do not have an initial capital letter). The order of the references is alphabetical by 1st author. For 2 or more references by the same 1st author, list first the references with 1 author (in chronological order), then the references with 2 authors (alphabetical by 2nd authors, then chronological), and then the references with 3 or more authors in chronological order. **Examples are:**

Coolidge G. 2005. "New thrips" cause significant damage to rose foliage and blooms [online] *In* Greater Palm Beach Rose Society [ed.], The Rose Petal. Greater Palm Beach Rose Society, Florida, http://www.centralfloridarosesociety.org/info/index.asp (last accessed 2 Sep 2014).

Jones JL. 2001. The title of a journal article. Florida Entomologist 84: 111–115.

Jones JL, Smith SR. 2012. This is a chapter title, pp. 200–210 *In* White MM, White-Brown AS [eds.], The Big Bug Book. Academic Press, London, United Kingdom.

Jones JL, Smith SR, White-Brown AS. 2009. The title of a journal article. Crop Protection 28: 223–229.

Manning LJ, Erikson AI, Harper D, O'Brien LS, Martin FG. 2014. The title of a journal article in press. Environmental Entomology (in press).

Thomas MC. 2005. An exotic baridine weevil pest (Coleoptera: Curculionidae) of Amaryllidaceae in Florida. Florida Department of Agriculture and Consumer Services,

Division of Plant Industry, DACS-P-01664, http://www.freshfromflorida.com/pi/pest-alerts/pdf/amaryllis-weevil.pdf (last accessed 3 Aug 2014).

White MM, White-Brown AS [eds.]. 2011. The Big Bug Book. Academic Press, London, United Kingdom.

Young JJ, Old BC. 2013. Predator–prey dynamics and strategies for control of citrus psyllid, pp. 123-130 *In* Proceedings of the 5th Meeting of the Florida IPM Working Group. Orlando, Florida, 9–12 Mar 2013.

The reference list is the last part of the text body. Next, present each table on a separate page. **Insert a page break before each table** (i.e., do NOT hit the "enter" key to insert lines until you reach the next page). The format of a table title is as follows:

[PAGE BREAK before 1st table]

**Table 1.** This is the title of the table. Include enough information so that the reader can understand the contents of the table without having to refer to the text. Spell out species names, for example *Drosophila melanogaster*, if you use the Latin binomial.

The table title should fully describe the table. It is left-justified and ends with a period. Note that "**Table 1.**" is bold, but the remainder of the title is not. **Tables must be created with the Insert Table function.** Table footnotes are written below the table and indicated with superscript lowercase letters. Please refer to the sample table below to see how to format each table. Tables have no borders between columns and no borders between rows of the table body. Each table has 3 borders: one on the top, one on the bottom, and one that separates the header row from the body of the table. If applicable, place a border between a header row and its sub-header row. The first (left) column is left-justified, all other columns are centered.

When you have inserted all tables (each on its own page), insert a page break and list all figure captions on one page. The format of a figure caption is as follows:

**Fig. 1.** This is the figure caption. Include enough information so that the reader can understand the contents of the figure without having to refer to the text. Spell out species names, for example *Drosophila melanogaster*, if you use the Latin binomial. Explain the meaning of symbols, bars, letters, etc. Include brief information on statistical analyses if applicable.

The figure caption should fully describe the figure. It is left-justified and ends with a period. Note that "**Fig. 1.**" is bold, but the remainder of the caption is not. After the list of figure captions, insert a page break and insert the first figure on the new page. Copy and paste the

figure caption so that it appears once more beneath the figure. Repeat this process on a separate page for each additional figure. Ideal figure widths at 100% view are 3.54 inches for single-column, and 7.25 inches for two-column images. The maximum depth is 9.00 inches. Ideal figure resolution is 300 to 600 dpi. If you prefer a certain figure width (1 column or 2 columns) in the final article, indicate it after the figure caption. **Submit all figures (or figure plates) separately as high-resolution tiff or tif files** (file size approx. 1–5 MB, but NOT larger than 15 MB).

Examples of tables and figures follow on the next pages.

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**Table 1.** Mean (± SD) weight gain in *Diaprepes abbreviatus* larvae that survived oral treatment with *Helicosporidium* cysts at 2.5 $\times 10^5$ cysts per larva.

| Treatment | Infection | N | Weight (mg)[a] | | |
|---|---|---|---|---|---|
| | | | Initial | After 3 wk | After 6 wk |
| Control | No | 67 | 15 ± 4a | 228 ± 75a | 480 ± 149a |
| Isolate A | Yes | 32 | 15 ± 4a | 191 ± 82b | 251 ± 112b |
| | No | 6 | 16 ± 3a | 192 ± 85ab | 441± 21ab |
| Isolate B | Yes | 39 | 15 ± 4a | 105 ± 78c | 255 ± 130b |
| | No | 5 | 13 ± 3a | 229 ± 55ab | 472 ± 86a |

[a] Means in a column followed by different lowercase letters are significantly different ($P \leq 0.05$; ANOVA and LSD test).

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**Figure Captions**

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**Fig. 1.** This is a figure caption. Include enough information so that the reader can understand the contents of the figure without having to refer to the text. Explain the meaning of symbols, bars, letters, etc. Include brief information on statistical analyses if applicable.

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**Fig. 2.** This is another figure caption. Spell out species names, for example *Drosophila melanogaster*, if you use the Latin binomial.

[PAGE BREAK]

[Place a **low-resolution** copy of Fig. 1 here and **submit a separate high-resolution** tif or tiff file.]

**Fig. 1.** This is a figure caption. Include enough information so that the reader can understand the contents of the figure without having to refer to the text. Explain the meaning of symbols, bars, letters, etc. Include brief information on statistical analyses if applicable.

[PAGE BREAK]

[Place a **low-resolution** copy of Fig. 2 here and **submit a separate high-resolution** tif or tiff file.]

**Fig. 2.** This is another figure caption. Spell out species names, for example *Drosophila melanogaster*, if you use the Latin binomial.