

Curriculum Vitae

Personal information

First name / Surname

Nicola Bodino

E-mail

Nicola.bodino@ipspp.cnr.it Nicola.bodino@unito.it Nicola.bodino@gmail.com

Nationality

Italian

Gender

Male

Education and training

Dates

01/2013 – 03/2016

Title of qualification awarded

Doctorate in Agricultural, Forestal and Agroalimentary Sciences

Principal subjects/occupational skills covered

Biological control, biology and ecology of exotic insect pests and their natural enemies. I studied native natural enemies of the exotic tomato pinworm *Tuta absoluta* (Meyrick) (Lepidoptera: Gelechiidae), evaluating their exploitation within an integrated pest management perspective. I reared different indigenous parasitoid species, *Necremnus* spp. (Hymenoptera: Eulophidae), performed experiments revealing that these parasitoids can select exotic or indigenous hosts based on previous experiences. Potential attack capabilities of these parasitoids against the exotic pest were investigated, highlighting their biocontrol capabilities.

Name and type of organisation providing education and training

Università degli Studi di Torino DiSAFA, L.go Paolo Braccini 2, Grugliasco (TO) Italy

Level in national or international classification

PhD

Dates

02/2015 – 08/2015

Title of qualification awarded

Visiting PhD student

Principal subjects/occupational skills covered

Biological control, biology and ecology of natural enemies of exotic insect pests. Evaluation of biological aspects and adaptation capabilities of the parasitoid *Lysiphlebus testaceipes* (Cresson) (Hymenoptera: Braconidae) against the invasive soybean aphid, *Aphis glycines* Matsumura (Homoptera: Aphididae). I reared the parasitoid on different host species, testing the chances of adaptation of this natural enemy on the exotic aphid species. No clear adaptation capabilities to the soybean aphid were found, and a trivial effect of previous experiences was observed.

Name and type of organisation providing education and training

University of Minnesota, Department of Entomology 1980 Folwell Ave. St. Paul, MN 55108

Dates

09/2009 – 04/2012

Title of qualification awarded

Master's degree in environmental biology

Principal subjects/occupational skills covered

Animal biology, ecology, entomology, environmental impact assessment (E.I.A.)
Thesis title: Population dynamics of thrips (Thysanoptera: Thripidae) and predatory bugs of the genus *Orius* (Hemiptera: Anthocoridae) on strawberries and pepper in Piedmont (Italy). Grade 110/110 with honour.

Name and type of organisation providing education and training

University of Torino, DBIOS, via Accademia Albertina, 13-1023 Torino, Italy.

Level in national or international classification

Master's degree

Dates

09/2005 – 03/2009

Title of qualification awarded

Bachelor of Natural Sciences

Principal subjects/occupational skills covered

Animal biology, alpine ecology, taxonomy
Thesis title: Dung beetles (Insecta: Coleoptera) community in Alpi Marittime Natural Park (Piemonte, Italy). Grade 109/110

Name and type of organisation providing education and training | University of Torino, DBIOS, via Accademia Albertina, 13-1023 Torino, Italy.
Level in national or international classification | Bachelor's degree

Work experience

Dates	07/2021 – now
Occupation or position held	Postdoctoral fellow
Main activities and responsibilities	Research activities on Flavescence dorée (FD) epidemiology and population dynamics of its insect vectors in Piedmont vineyards transmission.
Name and address of employer	CNR-IPSP, Strada delle Cacce 9, Torino (TO) Italy
Dates	01/2018 – 06/2021
Occupation or position held	Postdoctoral fellow
Main activities and responsibilities	Research activities on transmission biology and epidemic spread of <i>Xylella fastidiosa</i> by xylem-sap feeder insects in Europe, focused on control of potential vectors of <i>X. fastidiosa</i> subsp. <i>pauca</i> in Apulia (Italy).
Name and address of employer	CNR-IPSP, Strada delle Cacce 9, Torino (TO) Italy
Dates	01/2017 – 12/2017
Occupation or position held	Postdoctoral fellow
Main activities and responsibilities	Research activities on biology, ecology and phenology of xylem-sap feeder insects present in Mediterranean olive groves, focused on potential vectors of <i>Xylella fastidiosa</i> .
Name and address of employer	Università degli Studi di Torino DiSAFA, L.go Paolo Braccini 2, Grugliasco (TO) Italy
Dates	01/2016 – 12/2016
Occupation or position held	Postdoctoral scholarship
Main activities and responsibilities	Research activities on biology, ecology and phenology of xylem-sap feeder insects present in different agroecosystems susceptible to <i>X. fastidiosa</i> -related diseases.
Name and address of employer	Università degli Studi di Torino DiSAFA, L.go Paolo Braccini 2, Grugliasco (TO) Italy
Dates	07/2012 – 12/2012
Occupation or position held	Post-graduate scholarship
Main activities and responsibilities	Field assays on <i>Diabrotica virgifera virgifera</i> (Coleoptera: Chrysomelidae), evaluation of effects of insecticides, identification.
Name and address of employer	University of Torino Di.Va.P.R.A., Via Leonardo Da Vinci 4, Grugliasco (TO) Italy
Dates	07/2012 – 12/2012
Occupation or position held	Post-graduate scholarship
Main activities and responsibilities	Field monitoring and different traps efficacy testing on <i>Drosophila suzuki</i> (Diptera: Drosophilidae), identification, field work, social communication with farmers
Name and address of employer	C.R.eS.O. - Via Albertasse 16, Boves (CN), Italy
Dates	03/2011– 04/2011
Occupation or position held	Volunteer
Main activities and responsibilities	Insects identification and specimen mounting
Name and address of employer	Natural History Museum - Cromwell road, London SW7 5BD UK

Third mission activities

Dates 05/2016– now

Member of the ecological association “Successione Ecologica”, Italian network of young scientists aiming at sharing ideas, researches, and knowledge on environmental biology, ecology, and natural sciences.

Spokesperson of the research team of Agricultural Entomology laboratory of University of Torino at European Researchers’ Night (Marie Skłodowska-Curie Actions) in Torino (2016-2018).

Spokesperson of the research team of IPSP at European Researchers’ Night (Marie Skłodowska-Curie Actions) in Torino (2019).

(Selected) Research Projects

- **Globachem.** Project management and practical realization of experimental trials in both controlled and open field conditions on effectiveness of entomopathogenic fungi against insect vectors of *Xylella fastidiosa* and Flavescence dorée.
- **Xf-ACTORS.** *Xylella fastidiosa* Active Containment Through a Multidisciplinary-Oriented Research Strategy, H2020 research project. Actively involved in studying kinetics of *X. fastidiosa* in insect vectors and environmental influence on transmission efficiency of *X. fastidiosa* by the insect vector *Philaenus spumarius* L. (Hemiptera: Aphrophoridae). The project aims at providing a better knowledge on transmission biology and determinants of bacterium spread in olive groves.
- **EFSA procurement** (RC/EFSA/ALPHA/2015/01). Aimed at studying the biology and ecology of *P. spumarius* and other spittlebug species common in Italy and Europe, as vectors of the exotic bacterium *Xylella fastidiosa*. My research activities focused upon precise definition of life cycle, phenology and population dynamics of insect vectors in olive groves located in different Mediterranean areas. During this project I contributed to plan and carry out field activities, including samplings in olive orchards, experimental assays, data collection and statistical analyses.
- **PONTE.** Pest OrgaNisms Threatening Europe, H2020 research project. I have been actively involved in experiments evaluating dispersal capabilities of *P. spumarius* adults through Mark-Release-Recapture methods. Results are expected to implement current knowledge on *X. fastidiosa* spread and give practical basis for model development of diseases epidemics.

Personal skills and competences

Mother tongue(s)

Italian

Other language(s)

English, Spanish, German

Self-assessment

European level (*)

English

German

Spanish

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C1	Proficient user	C2	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user
A1	Basic user	A1	Basic user	A1	Basic user	A1	Basic user	A1	Basic user
A2	Basic user	A2	Basic user	A1	Basic user	A1	Basic user	A1	Basic user

(*) [Common European Framework of Reference for Languages](#)

- Certificate of attendance, Frances King School of English, 77 Gloucester Road, London; B2-C1, 2011;
- PET – Preliminary English Test, Cambridge ESOL; passed, 2002.

Communication skills

Experience in disseminating research activities and results towards the scientific community, stakeholders, and general audience. Experience in managing internal communication within working groups.

Social skills and competences

Cooperation skills developed by working in research projects based on teamwork. Social commitment matured by volunteering experiences with disabled people, kids and peer to peer education.

Organisational skills and competences

Organizational skills developed in taking part in multi-year research projects involving several teams of researchers, operational fields, and specific timelines.

Computer skills and competences

Good command of statistical software (R, SPSS), and GIS software (QGIS, R and DivaGIS) applied to scientific research and data analysis. Competent in Microsoft Office, particularly Excel, Word and Powerpoint, as well as their Open/Source counterparts, e.g., LibreOffice, OpenOffice. Competent in MacOS and Linux Ubuntu.

Driving license

B

Articles:

- Bodino N**, Demichelis S, Simonetto A, et al (2021) Phenology, seasonal abundance, and host-plant association of spittlebugs (Hemiptera: Aphrophoridae) in vineyards of Northwestern Italy. *Insects* 12:1012. [10.3390/insects12111012](https://doi.org/10.3390/insects12111012)
- Bodino N**, Cavalieri V, Pegoraro M, et al (2021) Temporal dynamics of the transmission of *Xylella fastidiosa* subsp. *pauca* by *Philaenus spumarius* to olive plants. *Entomologia Generalis* 41:463–480. <https://doi.org/10.1127/entomologia/2021/1294>
- Cornara D, Panzarino O, Santolemma G, **Bodino N**, et al (2021) Natural areas as reservoir of candidate vectors of *Xylella fastidiosa*. *Bulletin of Insectology* 74: 173-180.
- Bodino N**, Cavalieri V, Dongiovanni C, et al (2020) Spittlebugs of Mediterranean olive groves: host-plant exploitation throughout the year. *Insects* 11:130. <https://doi.org/10.3390/insects11020130>
- Ripamonti M, Pegoraro M, Rossi M, **Bodino N**, et al (2020) Prevalence of Flavescence Dorée phytoplasma-infected *Scaphoideus titanus* in different vineyard agroecosystems of Northwestern Italy. *Insects* 11:301. <https://doi.org/10.3390/insects11050301>
- Molinatto G, Demichelis S, **Bodino N**, et al (2020) Biology and Prevalence in Northern Italy of *Verrallia aucta* (Diptera, Pipunculidae), a Parasitoid of *Philaenus spumarius* (Hemiptera, Aphrophoridae), the Main Vector of *Xylella fastidiosa* in Europe. *Insects* 11:607. <https://doi.org/10.3390/insects11090607>
- Bodino N**, Cavalieri V, Dongiovanni C, et al (2019) Phenology, seasonal abundance and stage-structure of spittlebug (Hemiptera: Aphrophoridae) populations in olive groves in Italy. *Sci Rep* 9:17725. <https://doi.org/10.1038/s41598-019-54279-8>
- Cornara D, Morente M*, Markheiser A*, **Bodino N***, Tsai CW, Fereres A, Redak RA*, Perring TM*, Lopes JRS (2019) An overview on the worldwide vectors of *Xylella fastidiosa*. *Entomol Gen.* <https://doi.org/doi:10.1127/entomologia/2019/0811>
* these authors contributed equally to this paper
- Dongiovanni C, Cavalieri V, **Bodino N**, et al (2019) Plant selection and population trend of spittlebug immatures (Hemiptera: Aphrophoridae) in olive groves of the Apulia region of Italy. *J Econ Entomol* 112:67–74. <https://doi.org/10.1093/jee/toy289>
- Bodino N**, Ferracini C, Tavella L (2019) Functional response and age-specific foraging behaviour of *Necremnus tutae* and *N. cosmopterix*, native natural enemies of the invasive pest *Tuta absoluta* in Mediterranean area. *J Pest Sci* 92:1467–1478. <https://doi.org/10.1007/s10340-018-1025-6>
- Ingegno BL, Messelink GJ, **Bodino N**, et al (2019) Functional response of the mirid predators *Dicyphus bolivari* and *Dicyphus errans* and their efficacy as biological control agents of *Tuta absoluta* on tomato. *Journal of Pest Science* 92:1457–1466. <https://doi.org/10.1007/s10340-019-01079-8>
- Di Serio F, **Bodino N**, Cavalieri V, et al (2019) Collection of data and information on biology and control of vectors of *Xylella fastidiosa*. *EFSA Supporting Publications* 16:1628E. <https://doi.org/10.2903/sp.efsa.2019.EN-1628>
- Ingegno BL, Candian V, Psomadellis I, **Bodino N**, Tavella L (2017) The potential of host plants for biological control of *Tuta absoluta* by the predator *Dicyphus errans*. *B Entomol Res* 107(3), 340–348. <https://doi.org/10.1017/S0007485316001036>
- Bodino N**, Ferracini C, Tavella L (2016) Is host selection influenced by natal and adult experience in the parasitoid *Necremnus tutae* (Hymenoptera: Eulophidae)? *Anim Behav* 112:221–228. <http://dx.doi.org/10.1016/j.anbehav.2015.12.011>
- Mori E, Mazzetto F, Menchetti M, **Bodino N**, Grasso E, Sposimo P (2016) Feeding ecology of the scops owl, *Otus scops* (Aves: Strigiformes), in the island of Pianosa (Tuscan Archipelago, Central Italy) outside the breeding period. *Ital J Zool* 83:417–422. <https://doi.org/10.1080/11250003.2016.1212937>
- Laurenzi A*, **Bodino N***, Mori E (2016) Much ado about nothing: assessing the impact of a problematic rodent on agriculture and native trees. *Mamm Res* 61:65–72. <https://doi.org/10.1007/s13364-015-0248-7>
* these authors contributed equally to this paper

Conference Proceedings:

- Bodino N**, Cavalieri V, Dongiovanni, et al (2021) Dispersione di *Philaenus spumarius*, vettore di *Xylella fastidiosa*, in oliveto e ambiente prativo. In: XXVI Congresso Nazionale Italiano di Entomologia, Torino (TO), Italy.
- Bodino N**, Cavalieri V, Almeida RPP, et al (2021) Matter of time: temporal dynamics of the transmission of *Xylella fastidiosa* by *Philaenus spumarius* to olive plants. In: XII European PhD Network “Insect Science.” Firenze (FI), Italy.
- Bodino N**, Cavalieri V, Dongiovanni, et al (2021) Dispersal of *Philaenus spumarius*, vector of *Xylella fastidiosa*, in olive grove and meadow agro-ecosystems. In: XF-FACTORS final meeting 2021. <https://doi.org/10.5281/zenodo.4670310>
- Gilioli G, Simonetto A, Sperandio G, Colturato M, **Bodino N**, et al (2021) Modelling the population dynamics of *Philaenus spumarius*: a fully mechanistic approach. In: XF-FACTORS final meeting 2021

- Cavaliere V, Dongiovanni C, Altamura G, et al (2021) Influence of the temperature on the acquisition efficiency of *Xylella fastidiosa* by *Philaenus spumarius*. In: XF-FACTORS final meeting 2021 <https://doi.org/10.5281/zenodo.468038>
- Bodino N** (2020) Vettori di *Xylella fastidiosa* in Europa: una prospettiva ecologica su trasmissione ed epidemiologia. In: Tavola rotonda "Insetti vettori di agenti fitopatogeni: meccanismi ed ecologia della trasmissione di virus e batteri", Accademia Nazionale Italiana di Entomologia. Firenze (FI), Italy.
- Bodino N**, Cavaliere V, Dongiovanni C, et al (2019) Transmission characteristics of *Xylella fastidiosa* subsp. *pauca* (ST53) by *Philaenus spumarius* and *Cicadella viridis*. In: 2nd European Conference on *Xylella fastidiosa* 2019. Zenodo, Ajaccio, France p 80. <https://doi.org/10.5281/zenodo.3548424>
- Bodino N**, Cavaliere V, Dongiovanni C, et al (2019) Phenology and host-plant association of spittlebugs in Mediterranean olive groves. In: 2nd European Conference on *Xylella fastidiosa* 2019. Ajaccio, France. p. 84. <https://zenodo.org/record/3548310>
- Simonetto A, Plazio E, Dongiovanni C, et al (2019) Mark-recapture experiments to estimate the dispersal capacity of *Philaenus spumarius*. In: 2nd European Conference on *Xylella fastidiosa* 2019. Ajaccio, France. p 75 <http://doi.org/10.5281/zenodo.3548294>
- Cavaliere V, **Bodino N**, Dongiovanni C, et al (2019) First studies on the relationship between *Xylella fastidiosa* subsp. *pauca* ST53 and its insect vector in Apulia. In: 3rd Annual Conference of the EuroXanth COST Action, Lednice, Czech Republic. p 65. <https://zenodo.org/record/3470860>
- Bodino N**, Cavaliere V, Dongiovanni C, et al (2019) Biologia della trasmissione di *Xylella fastidiosa* da parte del vettore *Philaenus spumarius*. In: Proceedings Resilienza la Ricerca *Xylella* parla al pubblico. Racale (LE), Italy. <https://zenodo.org/record/3471218>
- Cavaliere V, Dongiovanni C, **Bodino N**, et al (2019) Ricerca di nuovi insetti vettori di *Xylella fastidiosa* in Puglia. In: Proceedings Resilienza la Ricerca *Xylella* parla al pubblico. Racale (LE), Italy.
- Bodino N**, Cavaliere V, Dongiovanni C, et al (2019) Phenology and host-plant association of spittlebugs (Hemiptera: Aphrophoridae) in Mediterranean olive groves. In: X European PhD Network "Insect Science." Genova (GE), Italy.
- Bodino N**, Cavaliere V, Pegoraro M, Saladini MA, Ciniero A, Dongiovanni C, Altamura G, Zicca S, Saponari A, Saponari M, Bosco D, (2018) Preliminary results on the transmission characteristics of *Xylella fastidiosa* subsp. *pauca* (ST53) by *Philaenus spumarius* and *Cicadella viridis*. In: POnTE and XF-ACTORS Projects Annual Meeting and Workshops, Valencia, Spain. <https://doi.org/10.5281/zenodo.2533156>
- Bodino N**, Plazio E, Picciau L, Cavaliere V, Dongiovanni E, Di Carolo M, Tauro D, Volani S, Salerno M, Russo V, Porcelli F, Gilioli G, Bosco D (2017) Phenology population dynamics and host plants of *Philaenus spumarius* in Italian olive groves. In: European Conference on *Xylella* 2017, Palma de Mallorca, Spain. <https://doi.org/10.5281/zenodo.1407670>
- Plazio E, **Bodino N**, Cavaliere V, Dongiovanni E, Fumarola G, Ciniero A, Galetto L, Saponari M, Bosco D (2017) Investigations on dispersal capability of *Philaenus spumarius* by mark-release-recapture method. In: European Conference on *Xylella* (2017), Palma de Mallorca, Spain. <https://doi.org/10.5281/zenodo.1065682>
- Dongiovanni C, Cavaliere V, **Bodino N**, Tauro D, Di Carolo M, Altamura G, Fumarola G, Ciniero A, Lasorella C, Bosco D, Saponari M (2017) Host-plant preference of *Philaenus spumarius* nymphs in olive orchards of the Apulia Region of Italy. In: European Conference on *Xylella* 2017, Palma de Mallorca, Spain. <https://doi.org/10.5281/zenodo.1065678>
- Bodino N**, Ferracini C, Tavella L (2016) Preferenza e risposta funzionale del parassitoide indigeno *Necremnus tutae* sul fitofago esotico *Tuta absoluta*. In: XXV Congresso Nazionale Italiano di Entomologia, Padova (PD), Italy.
- Ingegno BL, **Bodino N**, Tavella L (2016) Risposta funzionale del predatore *Dicyphus errans* sul fitofago esotico *Tuta absoluta*. In: XXV Congresso Nazionale Italiano di Entomologia, Padova (PD), Italy.
- Ingegno BL, **Bodino N**, Leman A, Messelink GJ, Tavella L (2016). Predatory efficacy of *Dicyphus errans* on different prey. In: III International Symposium on Organic Greenhouse Horticulture, Izmir, Turkey.
- Bodino N**, Ferracini C, Tavella L (2015). Host selection and functional response of *Necremnus tutae* (Hymenoptera: Eulophidae), a native parasitoid of the tomato pest *Tuta absoluta* (Lepidoptera: Gelechiidae) in Mediterranean area. In: 4th International Entomophagous Insect Conference, Torre del Mar, Spain.
- Bodino N**, Ferracini C, Ingegno BL, Alma A, Tavella L (2013). Biology and behaviour of two *Necremnus* species on exotic and native hosts. In: 4th Annual Meeting of the European PhD Network in "Insect Science", Paluzza (UD), Italy.
- Bosco L, **Bodino N**, Baudino M, Tavella L (2012). Insecticides and beneficial predators: side effects on *Orius* spp. on IPM pepper and strawberries, in: IOBC/WPRS Bulletin, IOBC-WPRS Working Group "Integrated Control in Protected Crops, Mediterranean Climate," pp. 187–192, Catania (CT), Italy.

Bosco L, **Bodino N**, Tavella L, (2012). Side effects on *Orius* spp. of insecticides used on pepper and strawberry crops in northwestern Italy. Presentato al European PhD Network in "Insect Science", 3rd Annual Meeting. p. 46, Ivrea (TO), Italia, 6-9 novembre 2012.

Isaia M.; Negro M.; Paschetta M.; Chiappetta G.; **Bodino N.**; Masante D.; Wolf-Schwenninger K.; Schonhoefer A.; Palestini C.; Rolando A., (2009). Indagini ecologiche sulle cenosi ad artropodi dei pascoli del Parco Naturale delle Alpi Marittime. In: 19° Congresso Nazionale della società Italiana di Ecologia "Dalle vette alpine alle profondità marine", Bolzano (BZ), Italy.

Teaching

- Course "Stat 101: Philosophy of uncertainty". University of Torino, DiSAFA, L.go Braccini 2, Grugliasco (TO), Italy. Topic: Theoretic and applied biostatistics. 15/02/2021.
- Seminar "Vectorsdi *Xylella fastidiosa* in Europa: biologia ed ecologia in un'ottica epidemiologica". In PhD Course in Crop Science – Plant Protection (SSD AGR/11), University of Padova, DAFNAE, Viale dell'Università, 16, 35020 Legnaro (PD), Italy. 29/07/2020.
- 2017-2020 Seminars "Vectors of *Xylella fastidiosa* in Europe" within the course "Entomology and applied biotechnology" by Prof. Domenico Bosco of Master's Degree "Biotecnologie vegetali". University of Torino, DiSAFA, L.go Braccini 2, Grugliasco (TO), Italy. 29/11/2017, 28/11/2018, 18/12/2019, 30/11/2020

Courses and Workshops

- Course "Geostatistic with R and QGIS". Organiser: TerreLogiche srl. Topic: Geographic Information Systems, 11/2020
- Course "Programming GIS with Python". Organiser: TerreLogiche srl. Topic: Geographic Information Systems, 10/2020
- Workshop "Scienza libera tutti – Open Science in ecologia". Dott. E. Giglia, Milano 11/2018.
- Course "Introduzione alla statistica spaziale con R". Dott. M. Sigovini, Milano 06/2017
- Course "Introduction to Quantum GIS". Dott. E. Fiore, LIPU, Torino, 11/2014
- Course "Inferenza statistica in Biologia e Scienze Umane". Prof. L. Bollani; Prof.ssa S. Bozza; Prof. M. Brizzi, Biostat, Asti, 06/2014
- Course "Analisi di dati ecologici in R: Modelli Lineari Generalizzati e loro estensioni". Dott.ssa M. Dal Bello; Dott. L. Rindi, Successione ecologica, Firenze, 11/2014
- "Mealybug transmission of grapevine ampeloviruses". Prof. R. Almeida, DiSAFA, Grugliasco, 06/2014
- VII Torino R net meeting. G.Fiorito; S. Salini; S. Schiapparelli, Uni-Astiss, Asti, 03/2014
- Course "R per ornitologi e naturalisti". Dott. A. von Hardenberg, LIPU, Torino, 02/2014
- Course "GIS livello avanzato in ambiente QGIS e SAGA". Ing. E. C Borgogno, DiSAFA, Grugliasco, 04/2013