ISSN: 1412-033X E-ISSN: 2085-4722

BIODIVERSITAS Journal of Biological Diversity Volume 2 0 - Number 2 - February 2 0 1 9





ISSN/E-ISSN:

1412-033X (printed edition), 2085-4722 (electronic)

EDITORIAL BOARD (COMMUNICATING EDITORS):

Abdel Fattah N.A. Rabou (Palestine), Agnieszka B. Najda (Poland), Alan J. Lymbery (Australia), Alireza Ghanadi (Iran), Ankur Patwardhan (India), Bambang H. Saharjo (Indonesia), Daiane H. Nunes (Brazil), Darlina Md. Naim (Malaysia), Ghulam Hassan Dar (India), Faiza Abbasi (India), Hassan Pourbabaei (Iran), I Made Sudiana (Indonesia), Ivan Zambrana-Flores (United Kingdom), Joko R. Witono (Indonesia), Katsuhiko Kondo (Japan), Krishna Raj (India), Livia Wanntorp (Sweden), M. Jayakara Bhandary (India), Mahdi Reyahi-Khoram (Iran), Mahendra K. Rai (India), Mahesh K. Adhikari (Nepal), Maria Panitsa (Greece), Muhammad Akram (Pakistan), Mochamad A. Soendjoto (Indonesia), Mohib Shah (Pakistan), Mohamed M.M. Najim (Srilanka), Morteza Eighani (Iran), Pawan K. Bharti (India), Paul K. Mbugua (Kenya), Rasool B. Tareen (Pakistan), Seweta Srivastava (India), Seyed Aliakbar Hedayati (Iran), Shahabuddin (Indonesia), Shahir Shamsir (Malaysia), Shri Kant Tripathi (India), Stavros Lalas (Greece), Subhash Santra (India), Sugiyarto (Indonesia), T.N. Prakash Kammardi (India)

EDITOR-IN-CHIEF:

Sutarno

EDITORIAL MEMBERS:

English Editors: **Graham Eagleton** (grahameagleton@gmail.com), **Suranto** (surantouns@gmail.com); Technical Editor: **Solichatun** (solichatun_s@yahoo.com), **Artini Pangastuti** (pangastuti_tutut@yahoo.co.id); Distribution & Marketing: **Rita Rakhmawati** (oktia@yahoo.com); Webmaster: **Ari Pitoyo** (aripitoyo@yahoo.com)

MANAGING EDITORS:

Ahmad Dwi Setyawan (unsjournals@gmail.com)

PUBLISHER:

The Society for Indonesian Biodiversity

CO-PUBLISHER:

Department of Biology, Faculty of Mathematics and Natural Sciences, Sebelas Maret University, Surakarta

ADDRESS:

Jl. Ir. Sutami 36A Surakarta 57126. Tel. +62-271-7994097, Tel. & Fax.: +62-271-663375, Email: unsjournals@yahoo.com

ONLINE:

biodiversitas.mipa.uns.ac.id

EXPERTISE AND CORRESPONDING EMAIL OF THE COMMUNICATING EDITORS:

GENETIC DIVERSITY: Agnieszka B. Najda (agnieszka.najda@up.lublin.pl), Alan J. Lymbery (a.lymbery@murdoch.edu.au), Darlina Md. Naim (darlinamdn@usm.my), Mahendra K. Rai (pmkrai@hotmail.com).

SPECIES DIVERSITY: Joko R. Witono (jrwitono@yahoo.com), Katsuhiko Kondo (k3kondo@nodai.ac.jp), Livia Wanntorp (livia.wanntorp@nrm.se), Mahesh K. Adhikari (mkg_adh@wlink.com.np), Maria Panitsa (mpanitsa@upatras.gr), Mohib Shah (mohibshah@awkum.edu.pk), Paul K. Mbugua (paulkmbugua@gmail.com), Rasool B. Tareen (rbtareen@yahoo.com).

ECOSYSTEM DIVERSITY: Abdel Fattah N.A. Rabou (arabou@iugaza.edu), Alireza Ghanadi (aghannadi@yahoo.com), Ankur Patwardhan (ankurpatwardhan@gmail.com), Bambang H. Saharjo (bhsaharjo@gmail.com), Daiane H. Nunes (nunesdaiane@gmail.com), Faiza Abbasi (faeza.abbasi@gmail.com), Ghulam Hassan Dar (profdar99@gmail.com), Hassan Pourbabaei

(hassan_pourbabaei@yahoo.com), I Made Sudiana (sudianai@yahoo.com), Ivan Zambrana-Flores (izambrana@gmail.com), Krishna Raj (krishnarajisec@yahoo.co.uk), Mahdi Reyahi-Khoram (phdmrk@gmail.com), Mochamad A. Soendjoto (masoendjoto@gmail.com),

Mohamed M.M. Najim (mnajim@kln.ac.lk), Morteza Eighani (morteza_eighani@yahoo.com), Pawan K. Bharti (gurupawanbharti@rediffmail.com), Seweta Srivastava (seweta.21896@lpu.co.in), Seyed Aliakbar Hedayati (Hedayati@gau.ac.ir), Shahabuddin (shahabsaleh@gmail.com), Shahir Shamsir (shahirshamsir@gmail.com), Shri Kant Tripathi (sk_tripathi@rediffmail.com), Stavros Lalas (slalas@teilar.gr), Subhash Santra (scsantra@yahoo.com), Sugiyarto (sugiyarto_ys@yahoo.com), T.N.Prakash Kammardi (prakashtnk@yahoo.com).

ETHNOBIOLOGY: M. Jayakara Bhandary (mbjaikar@gmail.com), Muhammad Akram (makram_0451@hotmail.com).





GUIDANCE FOR AUTHORS

Aims and Scope *Biodiversitas, Journal of Biological Diversity* or abbreviated as *Biodiversitas* encourages submission of manuscripts dealing with all biodiversity aspects of plants, animals and microbes at the level of the gene, species, and ecosystem as well as ethnobiology.

Article types The journal seeks original full-length research papers, reviews, and short communication. Manuscript of original research should be written in no more than 8,000 words (including tables and picture), or proportional with articles in this publication number. Review articles will be accommodated, while, short communication should be written at least 2,000 words, except for pre-study.

Submission The journal only accepts online submission, through open journal system (https://smujo.id/biodiv/about/submissions) or email to the editors at unsjournals@gmail.com. Submitted manuscripts should be the original works of the author(s). The manuscript must be accompanied by a cover letter containing the article title, the first name and last name of all the authors, a paragraph describing the claimed novelty of the findings versus current knowledge. Submission of a manuscript implies that the submitted work has not been published before (except as part of a thesis or report, or abstract); and is not being considered for publication elsewhere. When a manuscript written by a group, all authors should read and approve the final version of the submitted manuscript and its revision; and agree the submission of manuscripts for this journal. All authors should have made substantial contributions to the concept and design of the research, acquisition of the data and its analysis; drafting of the manuscript and correcting of the revision. All authors must be responsible for the quality, accuracy, and ethics of the work.

Ethics Author(s) must obedient to the law and/or ethics in treating the object of research and pay attention to the legality of material sources and intellectual property rights.

Copyright If and when the manuscript is accepted for publication, the author(s) still hold the copyright and retain publishing rights without restrictions. Authors or others are allowed to multiply article as long as not for commercial purposes. For the new invention, authors are suggested to manage its patent before published.

Open access The journal is committed to free-open access that does not charge readers or their institutions for access. Readers are entitled to read, download, copy, distribute, print, search, or link to the full texts of articles, as long as not for commercial purposes. The license type is CC-BY-NC-SA.

Acceptance The only articles written in English (U.S. English) are accepted for publication. Manuscripts will be reviewed by editors and invited reviewers(double blind review) according to their disciplines. Authors will generally be notified of acceptance, rejection, or need for revision within 1 to 2 months of receipt. The manuscript is rejected if the content does not in line with the journal scope, does not meet the standard quality, inappropriate format, complicated grammar, dishonesty (i.e. plagiarism, duplicate publications, fabrication of data, citations manipulation, etc.), or ignoring correspondence in three months. The primary criteria for publication are scientific quality and biodiversity significance. Uncorrected proofs will be sent to the corresponding author by email as .doc or .docx files for checking and correcting of typographical errors. To avoid delay in publication, corrected proofs should be returned in 7 days. The accepted papers will be published online in a chronological order at any time, but printed in the early of each month (12 times).

A charge Starting on January 1, 2017, publishing costs waiver is granted to foreign (non-Indonesian) authors who first publish the manuscript in this journal, especially for graduate students from developing countries. However, other authors are charged USD 250 (IDR 3,500,000). Additional charges may be billed for language editing, USD 75-150 (IDR 1,000,000-2,000,000).

Reprints The sample journal reprint is only available by special request. Additional copies may be purchased when ordering by sending back the uncorrected proofs by email.

Manuscript preparation Manuscript is typed on A4 (210x297 mm²) paper size, in a single column, single space, 10-point (10 pt) Times New Roman font. The margin text is 3 cm from the top, 2 cm from the bottom, and 1.8 cm from the left and right. Smaller lettering size can be applied in presenting table and figure (9 pt). Word processing program or additional software can be used, however, it must be PC compatible and Microsoft Word based (.doc or .rtf; not .docx). Scientific names of species (incl. subspecies, variety, etc.) should be written in italic, except for italic sentence. Scientific name (genera, species, author), and cultivar or strain should be mentioned completely for the first time mentioning it in the body text, especially for taxonomic manuscripts. Name of genera can be shortened after first mentioning, except generating confusion. Name of the author can be eliminated after first mentioning. For example, Rhizopus oryzae L. UICC 524, hereinafter can be written as R. oryzae UICC 524. Using trivial name should be avoided, otherwise generating confusion. Biochemical and chemical nomenclature should follow the order of the IUPAC - IUB. For DNA sequence, it is better used Courier New font. Symbols of standard chemical and abbreviation of chemistry name can be applied for common and clear used, for example, completely written butilic hydroxyl toluene (BHT) to be BHT hereinafter. Metric measurement use IS denomination, usage other system should follow the value of equivalent with the denomination of IS first mentioning. Abbreviations set of, like g, mg, mL, etc. do not follow by dot. Minus index (m-2, L-1, h-1) suggested to be used, except in things like "perplant" or "per-plot". Equation of mathematics does not always can be written down in one column with text, in that case can be written separately. **Number** one to ten are expressed with words, except if it relates to measurement, while values above them written in number, except in early sentence. The fraction should be expressed in decimal. In the text, it should be used "%" rather than "percent". Avoid expressing ideas with complicated sentence and verbiage, and used efficient and effective sentence.

Title of the article should be written in compact, clear, and informative sentence, preferably not more than 20 words. Name of author(s) should be completely written. **Name and institution** address should also be completely written with street name and number (location), postal code, telephone number, facsimile number, and email address. Manuscript written by a group, author for correspondence along with address is required. First page of the manuscript is used for writing above information.

Abstract should not be more than 200 words. Keywords is about five words, covering scientific and local name (if any), research theme, and special methods which used; and sorted from A to Z. All important abbreviations must be defined at their first mention. Running title is about five words. Introduction is about 400-600 words, covering the background and aims of the research. Materials and Methods should emphasize on the procedures and data analysis. Results and Discussion should be written as a series of connecting sentences, however, for manuscript with long discussion should be divided into subtitles. Thorough discussion represents the causal effect mainly explains for why and how the results of the research were taken place, and do not only re-express the mentioned results in the form of sentences. Concluding sentence should be given at the end of the discussion. Acknowledgments are expressed in a brief; all sources of institutional, private and corporate financial support for the work must be fully acknowledged, and any potential conflicts of interest are noted.

Figures and Tables of maximum of three pages should be clearly presented. Title of a picture is written down below the picture, while title of a table is written above the table. Colored figures can only be accepted if the information in the manuscript can lose without those images; chart is preferred to use black and white images. Author could consign any picture or photo for the front cover, although it does not print in the manuscript. All images property of others should be mentioned source. **There is no appendix**, all data or data analysis are incorporated into Results and Discussions. For broad data, it can be displayed on the website as a supplement.

References Author-year citations are required. In the text give the authors name followed by the year of publication and arrange from oldest to newest and from A to Z. In citing an article written by two authors, both of them should be mentioned, however, for three and more authors only the first author is mentioned followed by et al., for example: Saharjo and Nurhayati (2006) or (Boonkerd 2003a, b, c; Sugiyarto 2004; El-Bana and Nijs 2005; Balagadde et al. 2008; Webb et al. 2008). Extent citation as shown with word "cit" should be avoided. Reference to unpublished data and personal communication should not appear in the list but should be cited in the text only (e.g., Rifai MA 2007, pers. com. (personal communication); Setyawan AD 2007, unpublished data). In the reference list, the references should be listed in an alphabetical order (better, if only 20 for research papers). Names of journals should be abbreviated. Always use the standard abbreviation of a journal's name according to the ISSN List of Title Word Abbreviations (www.issn.org/2-22661-LTWA-online.php). The following examples are for guidance.

Journal:

Saharjo BH, Nurhayati AD. 2006. Domination and composition structure change at hemic peat natural regeneration following burning; a case study in Pelalawan, Riau Province. Biodiversitas 7: 154-158.

Book

Rai MK, Carpinella C. 2006. Naturally Occurring Bioactive Compounds. Elsevier, Amsterdam.

Chapter in book:

Webb CO, Cannon CH, Davies SJ. 2008. Ecological organization, biogeography, and the phylogenetic structure of rainforest tree communities. In: Carson W, Schnitzer S (eds) Tropical Forest Community Ecology. Wiley-Blackwell, New York.

Abstract:

Assaeed AM. 2007. Seed production and dispersal of *Rhazya stricta*. 50th annual symposium of the International Association for Vegetation Science, Swansea, UK, 23-27 July 2007.

Proceeding:

Alikodra HS. 2000. Biodiversity for development of local autonomous government. In: Setyawan AD, Sutarno (eds.) Toward Mount Lawu National Park; Proceeding of National Seminary and Workshop on Biodiversity Conservation to Protect and Save Germplasm in Java Island. Universitas Sebelas Maret, Surakarta, 17-20 July 2000. [Indonesian]

Thesis, Dissertation:

Sugiyarto. 2004. Soil Macro-invertebrates Diversity and Inter-Cropping Plants Productivity in Agroforestry System based on Sengon. [Dissertation]. Universitas Brawijaya, Malang. [Indonesian]

Information from internet:

Balagadde FK, Song H, Ozaki J, Collins CH, Barnet M, Arnold FH, Quake SR, You L. 2008. A synthetic *Escherichia coli* predator-prey ecosystem. Mol Syst Biol 4: 187. www.molecularsystemsbiology.com

ISSN: 1412-033X E-ISSN: 2085-4722

BIODIVERSITAS

Distribution, abundance, and habitats of rare species <i>Parnopes grandior</i> (Pallas 1771) (Hymenoptera, Chrysididae) in Mordovia and adjacent regions, Russia ALEXANDER B. RUCHIN, ALEXANDER V. ANTROPOV, ANATOLIY A. KHAPUGIN	303-310
Short Communication: Carbon sequestration by young <i>Rhizophora apiculata</i> plants in Kubu Raya District, West Kalimantan, Indonesia RINTO WIARTA, YULIATI INDRAYANI, FAIRUZ MULIA, DWI ASTIANI	311-315
Ladybird beetles fauna (Coleoptera: Coccinellidae) of the Republic of Mordovia, Russia ALEXANDER B. RUCHIN, LEONID V. EGOROV, GENNADY B. SEMISHIN	316-327
Morphological characters, flowering and seed germination of the Indonesian medicinal plant <i>Orthosiphon aristatus</i> SHALATI FEBJISLAMI, ANI KURNIAWATI, MAYA MELATI, YUDIWANTI WAHYU	328-337
Biological activity of some essential oil constituents in four <i>Nepeta</i> L. species against <i>Sitophilus oryzae</i> L. SHAHLA AMINI, MAJID GHORBANI NOHOOJI, MOUSA KHANI, MOHAMMAD REZA LABBAFI, FARAHNAZ KHALIGHI-SIGAROODI	338-343
Molecular and physiological characterization of indigenous copper-resistant bacteria from Cikapundung River, West Java, Indonesia WAHYU IRAWATI, NOMMENSEN PANGIHUTAN OMPUSUNGGU, DWI NINGSIH SUSILOWATI, TRIWIBOWO YUWONO	344-349
Cytochrome b mitochondrial DNA characteristic from non-invasive samples of wild population Javan Banteng (<i>Bos javanicus</i> d'Alton, 1823) MARYATUL QIPTIYAH, SATYAWAN PUDYATMOKO, AYPBC WIDYATMOKO, MUHAMMAD ALI IMRON, ILG NURTJAHJANINGSIH	350-355
Performance of agronomical and seed biochemical traits of soybean genotypes in relation to their tolerance and preference by <i>Nezara viridula</i> HERU KUSWANTORO, ERLIANA GINTING, JOKO SUSILO UTOMO, ERIYANTO YUSNAWAN	356-363
Genetic diversity of <i>Ralstonia solanacearum</i> , A phytopathogenic bacterium infecting horticultural plants in Java, Indonesia NIARSI MERRY HEMELDA, RAMADHANI SAFITRI, SONY SUHANDONO	364-372
Relative condition factor, length-weight relationship, and growth of three-spotted flounder, <i>Pseudorhombus triocellatus</i> from Parangipettai Coast, India PALANIVEL BHARADHIRAJAN, GOPALAN MAHADEVAN, PERUMAL MURUGESAN, SAMANTHAM MURUGAN, MOJTABA POULADI, REZA ABBASPOUR NADERI	373-379
Genetic and phenotypic diversity, heritability, and correlation between the quantitative characters on 30 sweet potato germplasms in Lampung, Indonesia RATNA DEWI, SETYO DWI UTOMO, M. KAMAL, PAUL B. TIMOTIWU, SITI NURDJANAH	380-386
Genetic characterization of Gac (<i>Momordica cochinchinesis</i>) accessions in Southern Vietnam by ISSR markers VIET THE HO, HUU TRIET LE, THANH AN NGUYEN	387-392
Floral structure and genetical differences of sandalwood variants in Gunung Sewu (Java, Indonesia), and its effects on breeding systems and reproductive ability YENI W.N. RATNANINGRUM, AFFAN KURNIAWAN	393-404

The Arbuscular Mycorrhizal Fungi's diversity in Fabaceous trees species of Northeastern Thailand PENPITCHA CHOOSA-NGA, UTHAIWAN SANGWANIT, THARNRAT KAEWGRAJANG	05-412
The composition and diversity of plant species in <i>pasak bumi's</i> (<i>Eurycoma longifolia</i>) 4 habitat in Batang Lubu Sutam forest, North Sumatra, Indonesia ARIDA SUSILOWATI, HENTI HENDALASTUTI RACHMAT, DENI ELFIATI, M. HABIBI HASIBUAN	13-418
Short Communication: Landmark-based geometric morphometric analysis of wings to distinguish the sex of <i>Aedes</i> mosquito vectors in Thailand TANAWAT CHAIPHONGPACHARA, SEDTHAPONG LAOJUN	19-424
Short Communication: Positional behavior of captive Bornean Orangutan (Pongo pygmaeus) at Bukit Merah Orangutan Island, Perak, Malaysia SITI NORSYUHADA KAMALUDDIN: SABAPATHY DHARMALINGAM, BADRUL MUNIR MD-ZAIN	25-429
Short Communication: A report on ranging behavior of Malayan flying lemurs, Galeopterus variegatus, in West Indonesia: Relationships with habitat characteristics YAMATO TSUJI, BAMBANG PRAYITNO, TAKAFUMI TATEWAKI, KANTHI ARUM WIDAYATI, BAMBANG SURYOBROTO	30-435
Short Communication: Agro-morphological diversity among four tomato cultivars in western Burundi FREDERIC NGEZAHAYO, JEAN CLAUDE NGENDAKURIYO, EMMANUEL BIZINDAVYI, CYRILLE MBONIHANKUYE	36-441
Short Communication: Genetic resources of fast-growing tree for rehabilitating upland area of deteriorated Saguling catchment, West Java, Indonesia HENTI HENDALASTUTI RACHMAT, ATOK SUBIAKTO, ARIDA SUSILOWATI	42-447
Short Communication: Variation in chemical constituent of <i>Styrax sumatrana</i> wood growing at different cultivation site in North Sumatra, Indonesia APRI HERI ISWANTO, YENNI SUHAIDA SIREGAR, ARIDA SUSILOWATI, ATMAWI DARWIS, RUDI HARTONO, BASUKI WIRJOSENTONO, HENTI HENDALASTUTI RACHMAT, ASEP HIDAYAT, WIDYA FATRIASARI	48-452
Species diversity and community composition of mosquitoes in a filariasis endemic area in Banyuasin District, South Sumatra, Indonesia RINI PRATIWI, CHAIRIL ANWAR, SALNI, HERMANSYAH, NOVRIKASARI, AHMAD GHIFFARI, RADEN PUTRA, ADRI HUDA	53-462
The morphological diversity of <i>Chrysanthemum</i> resulted from gamma ray irradiation EMI SUSILA, ARI SUSILOWATI, AHMAD YUNUS	63-467
Short Communication: A checklist of the mosquito species (Diptera: Culicidae) in the Suan Phueng District, Ratchaburi Province, Thailand TANAWAT CHAIPHONGPACHARA	68-473
Importance of the Congonhas River for the conservation of the fish fauna of the Upper Paraná basin, Brazil DIEGO AZEVEDO ZOCCAL GARCIA, ANA PAULA VIDOTTO-MAGNONI, ALEXANDRO DERLY AUGUSTO COSTA, ARMANDO CÉSAR RODRIGUES CASIMIRO, LUCAS RIBEIRO JARDULI, JOÃO DANIEL FERRAZ, FERNANDA SIMÕES DE ALMEIDA, MÁRIO LUÍS ORSI	74-481
Ecological aspects and genetic diversity of <i>Shorea balangeran</i> in two forest types of Muara Kendawangan Nature Reserve, West Kalimantan, Indonesia FITRI INDRIANI, ULFAH J. SIREGAR, DEDEN D. MATRA, ISKANDAR Z. SIREGAR	82-488
Lichen diversity as indicators for monitoring ecosystem health in Rawa Danau Nature Reserve, Banten, Indonesia RIDA OKTORIDA KHASTINI, INDAH JUWITA SARI, YOLA HERYSCA, SITI SULASANAH	89-496
Pathognomonic features and ultrastructural of Koi Herpesvirus infected <i>Oreochromis niloticus</i> BUDI RIANTO WAHIDI, UUN YANUHAR, MOHAMAD FADJAR, SRI ANDAYANI	97-503

Mercury levels and tolerable weekly intakes (TWI) of tuna and tuna-like species from the Southern Indian Ocean (Indonesia): Public health perspective TRI HANDAYANI, MOHAMAD SYAMSUL MAARIF, ETTY RIANI, NAZORI DJAZULI	504-509
Medicinal plants used by the Batak Toba Tribe in Peadundung Village, North Sumatra, Indonesia MARINA SILALAHI, NISYAWATI, DINGSE PANDIANGAN	510-525
Short Communication: Effect of different feed combination on the growth development of spotted cuscus (Spilocuscus maculatus) in captivity MARTHA KAYADOE, ANA ROCHANA, UJANG HIDAYAT TANUWIRIA, SAULAND SINAGA	526-531
Short Communication: Phenotypic diversity of male Burgo chicken from Bengkulu, Indonesia JOHAN SETIANTO, SUTRIYONO, HARDI PRAKOSO, BASYARUDDIN ZAIN, RIFKY ADWIYANSYAH, AMIR HUSAINI KARIM AMRULLAH	532-536
Identification of Beche-de-mers from Indonesia by molecular approach GINTUNG PATANTIS, ARIYANTI S. DEWI, YUSRO N. FAWZYA, MUHAMMAD NURSID	537-543
Adaptation of <i>Morus alba</i> and <i>Morus cathayana</i> plants in a different climate and environment conditions in Indonesia NANANG SASMITA, JHON HARDY PURBA, I GUSTI AYU DIYAH YUNITI	544-554
In vitro antibacterial activity of traditionally used medicinal plants against Xanthomonas campestris pv. musacearum in Ethiopia GETAHUN YEMATA, BRUKTAWIT DESTA, MASRESHA FETENE	555-561
Diversity of endophytic fungi in cajuput leaf waste (<i>Melaleuca cajuputi</i>) ANA WIDIANA, UKIT, AFIFAH THAHIRAH, EPA PAUJIAH	562-569
Differential impacts of 2016 coral bleaching on coral reef benthic communities at Sekotong Bay, Lombok Barat, Indonesia IMAM BACHTIAR, TRI ARYONO HADI	570-575
Antioxidant activity, total phenolic and flavonoid content of several indigenous species of ferns in East Kalimantan, Indonesia HENNY NURHASNAWATI, REKSI SUNDU, SAPRI, RISA SUPRININGRUM, HARLINDA KUSPRADINI, ENOS TANGKE ARUNG	576-580
Nutritional component of <i>Barbonymus balleroides</i> : A wild fresh water fish from Indonesia	581-588
SYAHFITRI ANITA, HARYONO, GEMA WAHYUDEWANTORO Short Communication: Evaluation of water quality and survival rate of red tilapia (Oreochromis niloticus) by using rice-fish culture system in quarry land of clay DEWI HIDAYATI, SUPIANA DIAN NURTJAHYANI, DWI OKTAFITRIA, NOVA MAULIDINA ASHURI, WAHYU KURNIALLAH	589-594
Riparian tree and bird diversity in Cisadane River, South Tangerang City, Indonesia URFI IZZATI, HAYATI SARI HASIBUAN, TITO LATIF INDRA	595-603
Bird fauna encountered at the main campus of the Islamic University of Gaza, Gaza City, Palestine ABDEL FATTAH N. ABD RABOU	604-614
Determination of leaf status of soybean varieties on shading LISA MAWARNI, TENGKU CHAIRUN NISA, JUSTIN A. NAPITUPULU, KARYUDI	615-620

Front cover: Coccinella septempunctata Linnaeus, 1758 (Рното: G. Semishin)

Published bimonthly PRINTED IN INDONESIA

ISSN: 1412-033X

E-ISSN: 2085-4722



0 0 772005 47261

"033610" 9"772085"47261