

4th EMBRIO International Symposium (EIS 2019) and 7th International Symposium of East Asia Fisheries and Technologists Association (EAFTA 2019)

Understanding of Fisheries and Marine Biodiversity

IOP Conference Series: Earth and Environmental Science
Volume 404

Bogor, Indonesia
5 - 6 August 2019

Editors:

Roni Nugraha
Yaqin Hu
Andreas L Lopata
Rajeesh M Dhere
Sonja Kleinertz
Nurjanah
Mala Nurilmala
Muhammad Fedi Alfiadi Sondita
Charles PH. Simanjuntak
Hawis Madduppa

Asadatun Abdullah
Ichsan Ahmad Fauzi
Roza Yusfiandayani
Eddy Supriono
Neviaty P. Zamani
Yuni Puji Hastuti
Vita R Kurniawati
Meutia Samira Ismet
Beginer Subhan

ISBN: 978-1-7138-1303-3
ISSN: 1755-1307

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

This work is licensed under a Creative Commons Attribution 3.0 International Licence.
Licence details: <http://creativecommons.org/licenses/by/3.0/>.

No changes have been made to the content of these proceedings. There may be changes to pagination and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2020)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

CARBON FOOTPRINT OF FROZEN PANGASIU FILLET: A CASE STUDY	1
<i>A Poernomo, M R Suryanto, Sujuliyani</i>	
DNA BARCODING FOR SEAHORSE IDENTIFICATION AND ITS POTENTIAL AS ANTIOXIDANT AND STIMULANT INDICATOR	10
<i>M Nurilmala, E M Sari, A Abdullah, H H Hizbullah, N A Butet, A O Sudrajat</i>	
ANTIOXIDANT ACTIVITY OF BIOPIGMENT FRACTIONS FROM GOLDEN APPLE SNAIL EGGS (POMACEA CANALICULATA)	21
<i>A Abdullah, Nurjanah, A V Seulalae</i>	
DETECTION OF BOTTOM SUBSTRATE TYPE USING SINGLE-BEAM ECHO SOUNDER BACKSCATTER: A CASE STUDY IN THE EAST COASTAL OF BANYUASIN	31
<i>Fauziyah, A I S Purwiyanto, F Agustriani, W A E Putri, M Liyani, R Aryawati, E N Ningsih, Y Suteja</i>	
POTENTIAL UTILIZATION OF BOTRIOCOCCUS BRAUNII AND NANNOCHLOROPSIS MICROALGAE AS A BIODIESEL SOURCE IN INDONESIA	40
<i>D Fithriani, S Melanie</i>	
CYTOTOXICITY OF MARINE-DERIVED FUNGI COLLECTED FROM KEPULAUAN SERIBU MARINE NATIONAL PARK	44
<i>M Nursid, A S Dewi, D Maya, Priyanti</i>	
ASSOCIATIVE-MESOFAUNA ABUNDANCE AND ITS CORRELATION WITH SPONGES ANTIBACTERIAL ACTIVITY IN SEAGRASS ECOSYSTEM	51
<i>M S Ismet, D G Bengen, W A Setianingsih, B A Yudhani, N M N Natih</i>	
UTILIZATION OF KAPPAPHYCUS ALVAREZII AND SARGASSUM PLAGYOPHYLLUM FROM BANTEN AS COSMETIC CREAMS	62
<i>M T Dolorosa, Nurjanah, S Purwaningsih, E Anwar</i>	
DETERMINING THE STOCK STATUS OF SNAPPER (LUTJANUS SP.) USING SURPLUS PRODUCTION MODEL: A CASE STUDY IN BANYUASIN COASTAL WATERS, SOUTH SUMATRA, INDONESIA	72
<i>Fauziyah, A I S Purwiyanto, F Agustriani, W A E Putri, Ermatita, A Putra</i>	
APPLICATION OF FOLDABLE CUBE AND CYLINDER FISHING POT IN TUBAN REGENCY WATER	84
<i>N Alfiatunnisa, F Rachman, E Setyobudi, Djumanto, S S Djasmani</i>	
HEAVY METAL CONTENT IN ANNUALLY-BANDED CORAL PORITES LUTEA AT WINDWARD AND LEEWARD OF TUNDA ISLAND, BANTEN BAY, WEST JAVA INDONESIA	92
<i>N P Zamani, Riska, T Prartono, A Arman, I Wahab</i>	
DETECTION OF SALMONELLA SP. IN FISHERIES PRODUCT USING REAL-TIME PCR	101
<i>R Nugraha, M Nurilmala, Nurjanah, P Pratama</i>	
CATHEPSIN CHARACTERIZATION FROM CRUDE EXTRACT OF YELLOW PIKE (CONGRESOX TALABON)	106
<i>R M Pertiwi, I D Pamungkas, D T Prastyo, D U Trisdiani, E Pasaribu, T Nurhayati</i>	
DETERMINATION OF FISHERIES REFUGIA AREA FOR FRESHWATER EELS (ANGUILLA SPP.) IN PALABUHANRATU BAY, WEST JAVA, INDONESIA	112
<i>A A Hakim, M M Kamal, N A Butet, R Affandi</i>	
QUALITY CHANGES OF LITTLE TUNA FILLET (EUTHYNNUS AFFINIS) DURING CHILLING TEMPERATURE STORAGE	120
<i>H H Hizbullah, N K Sari, T Nurhayati, M Nurilmala</i>	
ECONOMIC VALUATION OF MANGROVE ECOSYSTEM IN CILAMAYA WETAN, KARAWANG, WEST JAVA	134
<i>N Purida, M P Patria</i>	
SELECTION OF INTENSIVE SHRIMP FARMING TECHNOLOGY FOR SMALL FARMERS WITH ANALYTICAL HIERARCHY PROCESS: A CASE FOR WHITELEG SHRIMP (LITOPENAEUS VANNAMEI)	141
<i>R Zulkarnain, K Adiyana, Waryanto, H Nugroho, B Nugraha, L Thesiana, E Supriyono</i>	
THE EFFECT OF DEGRADATION TIME IN THE SIMULATED GASTRIC FLUID FOR BIOACTIVE COMPOUNDS FROM BEKASAM	149
<i>Rinto, S D Lestari, A Baehaki, Y Sari</i>	

ANALYSIS OF STOMACH CONTENT OF NEMIPTERUS JAPONICUS FROM THE BLIMBINGSARI WATERS, BANYUWANGI, EAST JAVA	158
<i>E Saraswati, G O Perdhana</i>	
CHARACTERISTICS OF ALGINATE CONTENT ON SARGASSUM POLYCYSTUM C.A. AGARDH FROM WESTERN JAVA, INDONESIA	163
<i>N Dharmayanti, J Supriatna, A Abinawanto, Y Yasman</i>	
BIOLOGICAL ASPECTS OF LEPTOBRAMA PECTORALIS RAMSAY AND OGILBY 1887 (LEPTOBRAMIDAE) IN MERAUKE, PAPUA, INDONESIA	170
<i>D D Kembaren, M Taufik</i>	
COMBINATION OF CELL DISRUPTION METHOD AND PH VARIATION AS PRE-TREATMENT FOR LIPID EXTRACTION OF NANNOCHLOROPSIS SP.	179
<i>S Melanie, D Fithriani</i>	
LIFE HISTORY AND LENGTH BASE SPAWNING POTENTIAL RATIO (LBSPR) OF MALABAR SNAPPER LUTJANUS MALABARICUS (BLOCH & SCHNEIDER, 1801) IN WESTERN OF SOUTH SULAWESI, INDONESIA	186
<i>T Ernawati, T W Budiarti</i>	
GROWTH PATTERN AND CONDITION FACTOR OF GIANT CATFISH (ARIUS THALASSINUS) IN THE CILACAP WATER, CENTRAL JAVA	194
<i>R F Anggawangsa, R Faizah</i>	
CHARACTERISTICS OF GRACILARIA SP. RESIDUE OF SEAWEED SAP EXTRACTION WITH EXTRACTION TIME TREATMENT	201
<i>Nurhayati, J Basmal, R Kusumawati, S Melanie</i>	
ELECTRICITY PRODUCTION FROM GELATIN WASTEWATER USING SINGLE-CHAMBER MICROBIAL FUEL CELLS	206
<i>R Irnawati, D Surilayani, R P Aditia, A Maldini, S Jusamatalaisi, G Pratama</i>	
COMPARISON OF MICROPLASTIC ABUNDANCE IN AQUACULTURE PONDS OF MILKFISH CHANOS CHANOS (FORSSKÅL, 1775) AT MUARA KAMAL AND MARUNDA, JAKARTA BAY	212
<i>V Priscilla, M P Patria</i>	
CHARACTERIZATION OF AQUATIC PLANT (EGERIA DENSA) PRE-TREATED BY ALKALINE HYDROGEN PEROXIDE	223
<i>S D Hardiningtyas, F Aziz, J Santoso, Uju</i>	
CHARACTERISTICS OF CHEMICAL COMPOUNDS OF HORSESHOE CRABS TACHYPLEUS GIGAS IN DIFFERENT BODY PROPORTIONS	234
<i>R Suwandhi, Nurjanah, M Z Ula, R M Pertiwi</i>	
PERFORMANCE ANALYSIS OF SMALL PELAGIC FISHING UNIT IN TAWANG FISHING PORT, KENDAL REGENCY	241
<i>S L Prasetyo, M S Baskoro, R Yusufandayani, R Pahlevi</i>	
CHARACTERIZATION OF FUNCTIONAL PROPERTIES CATFISH PROTEIN ISOLATES (CLARIAS SP.)	252
<i>S Haryati, Sukarno, S Budijanto, E Prangdimurti</i>	
IDENTIFICATION AND ABUNDANCE OF NITRIFYING-DENITRIFYING BACTERIA IN MALANG SAND FILTER BASED CULTURE ENVIRONMENT FOR MUD CRABS SCYLLA SERRATA	263
<i>Y P Hastuti, Y Andina, E Supriyono, Y S Fatma, S Tridesianti</i>	
THE EFFECT OF GRACILARIA POWDER ON THE CHARACTERISTICS OF NEMIPTERID FISH SAUSAGE	274
<i>Y H Sipahutar, T Taufiq, M G E Kristiani, D H G Prabowo, R R Ramadheka, M R Suryanto, R B Pratama</i>	
PRELIMINARY STUDY: PAIRED CLOWNFISH (AMPHIPRION SP.) SPAWNING PATTERN IN INDOOR REARING SYSTEM	280
<i>H A Sahusilawane, M Z Junior, M A Suprayudi, D T Soelistyowati, L I T A Tumbelaka, I Effendi</i>	
APPLICATION OF HALOPHILIC BACTERIA IN TRADITIONAL SOLAR SALT POND: A PRELIMINARY STUDY	288
<i>E Chasanah, A Pratitis, D Ambarwati, D Fithriani, R Susilowati, Marihati</i>	
HOMOGENEITY AND STABILITY OF A SECONDARY MICROBIOLOGICAL REFERENCE MATERIAL CANDIDATE FOR SALMONELLA IN FISH MATRIX	294
<i>E Kurniawati, B Ibrahim, Desniar</i>	
EFFECTS OF WATER CHESTNUT (ELEOCHARIS DULCIS) EXTRACT ON THE SHELF-LIFE OF REFRIGERATED CATFISH (PANGASIU SP.) FILLET	304
<i>A Baehaki, Herpandi, Rosalina</i>	
IDENTIFICATION POLYCYCLIC AROMATIC HYDROCARBONS (PAHS) IN THE BANYUASIN RIVER ESTUARY, SOUTH SUMATERA	311
<i>W A E Putri, A I S Purwiyanto, Fauziyah, F Agustriani</i>	

CHARACTERIZATION OF AMMONIUM SULPHATE FRACTION OF PEPSIN FROM FISH STOMACH.....	317
<i>M M Sholeh, L Ambarsari, W Nurcholis, T Nurhayati</i>	
ENZYME-ASSISTED EXTRACTION OF FATTY ACID FROM CAULERPA LENTILIFERA: A PRELIMINARY STUDY.....	323
<i>S I Rahmawati, F Izzati, Y Hapsari, E Septiana, F Rachman, Bustanussalam, P Simanjuntak</i>	
ACCUMULATION OF LEAD (PB) ON FISH CAUGHT BY MILLENNIUM GILLNETS (PLY) IN MUSI ESTUARY, BANYUASIN WATERS, SOUTH SUMATERA, INDONESIA.....	329
<i>F Agustriani, A I S Purwiyanto, W A E Putri, Fauziyah, Y Suteja</i>	
SUBSTRATE COMBINATION OF LEMNA MINOR AND MUDS AFFECTS BIOMASS AND POPULATION OF TUBIFEX SP.....	335
<i>Mahendra, D Damara, M Nufus, V R Putri</i>	
DISTRIBUTION AND ABUNDANCE OF THE ARFAK RAINBOWFISH, MELANOTAENIA ARFAKENSIS ALLEN, 1990 IN PRAFI RIVER SYSTEM, MANOKWARI, WEST PAPUA: DUE TO HABITAT DEGRADATION?.....	339
<i>E Manangkalangi, M F Rahardjo, R K Hadiaty, S Hariyadi, C P H Simanjuntak</i>	
CARBON SEQUESTRATION IN MACROALGAE KAPPAPHYCUS STRIATUM IN SEAWEED AQUACULTURE SITE, ALAANG VILLAGE, ALOR ISLAND, EAST NUSA TENGGARA.....	354
<i>M S Fakhraeni, W Wisnu, R Khathir, M P Patria</i>	
CORAL RECRUITMENT ON CONCRETE BLOCKS AT GOSONG PRAMUKA, KEPULAUAN SERIBU, JAKARTA.....	362
<i>B Subhan, N N Hudhayani, A Ervinia, P Santoso, D Arafat, D Khairudi, D Soedharma, R M Dhere, H Madduppa</i>	
PCR-RFLP AS A DETECTION METHOD OF ALLELIC DIVERSITY SEAHORSE HIPPOCAMPUS COMES (CANTOR, 1849) FROM BINTAN WATERS, RIAU ISLAND.....	373
<i>N S Meikasari, M Nurilmala, N A Butet, A O Sudrajat</i>	
ANTIBACTERIAL ACTIVITY OF SEA CUCUMBER (HOLOTHURIA ATRA) AGAINST PSEUDOMONAS AERUGINOSA.....	382
<i>M Sukmiwati, M Ilza, A E Putri, S W Sidauruk</i>	
LESSON LEARNED OF EAFM FROM POLE AND LINE FISHERY BASED IN SIKKA REGENCY, NUSA TENGGARA TIMUR.....	388
<i>F Satria, L Sadiyah, A A Widodo, Wudianto</i>	
CHARACTERISTIC OF CARRAGEENAN EUCHEUMA COTTONII COLLECTED FROM THE COAST OF TANJUNG MEDANG VILLAGE AND JAGA ISLAND, RIAU.....	401
<i>A Diharmi, Rusnawati, N Irasari</i>	
NANO COLLAGEN OF THE GROUPER SWIM BLADDER IN COMPLIANCE WITH QUALITY STANDARD OF COSMETICS MATERIALS.....	409
<i>W Trilaksani, I K M Adnyane, B Riyanto, N Safitri</i>	
CHARACTERIZATION AND FORMULATION OF SUNSCREEN FROM SEAWEED PADINA AUSTRALIS AND EUCHEMA COTTONII SLURRY.....	423
<i>Nurjanah, R Suwandi, E Anwar, F Maharany, T Hidayat</i>	
EVALUATING THE PROTEIN AND FAT CONTENT OF SKIPJACK (KATSUWONUS PELAMIS) IN THE SMOKING PROCESS OF ARABUSHI.....	432
<i>K Doe, F A Dali, R M Harmain</i>	
FATTY ACID PROFILE AND CHOLESTEROL LEVEL OF SMOKED WHITELEG SHRIMP (LITOPENAEUS VANNAMEI) WITH DIFFERENT LIQUID SMOKE CONCENTRATIONS.....	439
<i>N P Daniswara, F Swastawati, L Purnamayati</i>	
IN VITRO EVALUATION OF FACE MASK CONTAINING EXTRACT AND BIOMASS OF SPIRULINA PLATENSIS AND ITS ANTIBACTERIAL ACTIVITY.....	447
<i>I Setyaningsih, N I Sari, K Tarman, N Manurung, M Safithri</i>	
COLLAGEN PEPTIDES FROM PANGASIU FISH SKIN AS ANTIOXIDANTS.....	455
<i>N Azizah, Y Ochiai, M Nurilmala</i>	
DIET COMPOSITION AND TROPHIC NICHE SIMILARITIES OF ENGRAULID FISHES IN PABEAN BAY, INDRAMAYU, INDONESIA.....	461
<i>L S Syafei, R S Siregar, M F Rahardjo, C P H Simanjuntak</i>	
IDENTIFICATION AND CHARACTERIZATION OF SOLID WASTE FROM GRACILARIA SP. EXTRACTION.....	471
<i>J Basmal, I Munifah, M Rimmer, N Paul</i>	
THE RATIO OF NATIVE AND ALIEN FISH SPECIES IN BUYAN AND TAMBLINGAN LAKES, BALI.....	481
<i>N D Pertami, P A R P Tampubolon, I N Y Parawangsa, P R G Persada, E Manangkalangi, L S Syafei</i>	

ANALYSIS OF SOURCES AND COMPOSITION OF MARINE DEBRIS IN WESTERN AND SOUTHERN ACEH, INDONESIA	491
<i>R Fitria, F Diana, E Riani, G Yulianto, N Najmi</i>	
PEPSIN ACTIVITY FROM GASTRIC OF MILKFISH AND CATFISH IN INDONESIAN WATERS	498
<i>T Nurhayati, L Ambarsari, M Nurilmala, A Abdullah, I A I Rakhmawati, Yuniasih</i>	
THE INFLUENCE OF WOMEN'S LEADERSHIP IN THE FISHERY AND CLEANER PRODUCTION OF FISH PROCESSING INDUSTRY ON THE EFFECTIVENESS OF COASTAL PRESERVATION PROGRAM IN TANGERANG	506
<i>Y H Sipahutar, H Rahmayanti, R Achmad, M R Suryanto, R R Ramandeka, M R Syalim, R B Pratama, A N Rahmi, P Astrianti, G Mila</i>	
IDENTIFICATION OF ACTIVE COMPOUNDS FROM LINDUR ROOT PLANTS (BRUGUIERA GYMNORRHIZA) AS A-GLUCOSIDASE INHIBITORS	513
<i>S P S Dia, Nurjanah, A M Jacoeb</i>	
SPECIES COMPOSITION AND ABUNDANCE OF SMALL FISHES IN SEAGRASS BEDS OF THE KARANG CONGKAK ISLAND, KEPULAUAN SERIBU NATIONAL PARK, INDONESIA	529
<i>C P H Simanjuntak, Noviana, A K Putri, M F Rahardjo, Djumanto, L S Syafei, D Abdillah</i>	
IDENTIFICATION OF BIOACTIVE COMPOUNDS FROM NANNOCHLOROPSIS SP.	543
<i>D Fithriani, D Ambarwati, Nurhayati</i>	
BIOACTIVITIES OF RED SEAWEED EXTRACTS FROM BANTEN, INDONESIA	548
<i>T S Khatulistiani, D Noviendri, I Munifah, S Melanie</i>	
FISHING GEAR PRODUCTIVITY RELATED FISHING INTENSITY AND POTENCY OF STOCK VULNERABILITY IN SUNDA STRAIT	556
<i>Yonvimer, E Yuliana, D E Yani, L E Setjorini, Nurhasanah, A Santoso, M Boer, R Kurnia, S G Akmal</i>	
QUALITY OF EUCHEUMA COTTONII SEAWEED CULTIVATED IN LAMPUNG WATERS	565
<i>Subaryono, R Kusumawati</i>	
SOME CONSEQUENCES OF UNREPORTED FISHING ON THE RESULTS OF SIMPLE FISH STOCK ASSESSMENT	571
<i>M F A Sondita</i>	
THE CONDITION AND COMPOSITION OF SEAGRASS AND MOLLUSCA ON BIAK ISLAND, PAPUA	579
<i>L P Aji, A Widyastuti</i>	
EVALUATING THE EFFECTIVENESS OF MANGROVES REHABILITATION EFFORTS BY COMPARING THE BETA DIVERSITY OF REHABILITATED AND NATURAL MANGROVES	592
<i>R Rahmania, T L Kepel, T Arifin, Yulius</i>	
CHARACTERIZATION OF REFINED CARRAGEENAN FROM KAPPAPHYCUS ALVAREZII EXTRACTED USING MARINE FUNGI	600
<i>S Sulistiawati, N H Ain, Uju, K Tarman</i>	
APPLICATION OF END-POINT PCR TECHNIQUE TO DETECT BACTERIA ENCODING TYROSINE DECARBOXYLASE (TDC) GENE IN SCOMBRIDAE FISH	608
<i>A Abdullah, M Nurilmala, A S Budiarti</i>	
RESTRUCTURING STEAK FROM FLAKES OF YELLOWFIN TUNA MEAT USING LOW SALT MICROBIAL TRANSGLUTAMINASE (MTGASE)	615
<i>A Ardiansyah, L Sahubawa, Ustadi</i>	
FISH QUALITY AND NUTRITIONAL ASSESSMENT OF YELLOWFIN TUNA (THUNNUS ALBACARES) DURING LOW TEMPERATURE STORAGE	624
<i>Nurjanah, A Abdullah, I Naibaho, D Kartikayani, M Nurilmala, R Yusufiandayani, M F A Sondita</i>	
MOVING PATTERN AND FEEDING BEHAVIOR OF BLUE-SPOTTED RIBBONTAIL RAY (TAENIURA LYMMA) IN AQUARIA ENVIRONMENT	634
<i>H Madduppa, D Irawan, N P Zamani, B Subhan, D Arafat</i>	
ASSESSING STOCK STATUS OF GREY SHARPNOSE SHARK (RHIZOPRIONODON OLIGOLINX SPRINGER, 1964) IN JAVA SEA	640
<i>Wijopriono, T Ernawati</i>	
THE EFFECT OF BAIT TYPES ON THE CATCH OF FOLDABLE DOME FISHING POTS OPERATED IN TUBAN REGENCY	647
<i>SR Ningtias, F Rachman, E Setyobudi, Djumanto, SS Djasmani</i>	
PURIFICATION OF CHITOSANASE FROM STENOTROPHOMONAS MALTOPHILIA KPU 2123 AND MICROMONOSPORA SP. T5A1 FOR CHITOLIGOSACCHARIDE PRODUCTION	654
<i>G Patantis, D S Zilda, Y N Fawzya, E Chasanah</i>	
QUALITY OF BRINE BOILED INDIAN MACKEREL (RASTRELLIGER SP.) WITH DIFFERENT COOKING METHODS AND ADDITIONS OF LIQUID SMOKE	662
<i>M D Pertiwi, F Swastawati, U Amalia</i>	

TONIC IMMOBILITY INDUCTION AND DURATION ON HALMAHERA WALKING SHARK (HEMISCHYLLIUM HALMAHERA).....	669
<i>D A Mukharror, D Susiloningtyas, M Ichsan</i>	
POTENTIAL RISKS OF TUNA FISHING CONDUCTED IN INDONESIA'S WATERS AND ITS IMPACT ON TUNA AND SHARK	675
<i>L Sadiyah, F Satria, I T Hargiyatno, A A Widodo</i>	
ECOFRIENDLY LAND-BASED SPINY LOBSTER (PANULIRUS SP.) REARING WITH BIOFILTER APPLICATION IN RECIRCULATING AQUACULTURE SYSTEM.....	682
<i>L Thesiana, K Adiyana, R Zulkarnain, S S Moersidik, I Gusniani, E Supriyono</i>	
PRELIMINARY UNCERTAINTY ANALYSIS IN FISHERIES – THE CASE OF TWO FISHERIES IN INDONESIA	689
<i>L Adrianto, D Aprilyanti, R M Sitohang, I Nurokhmah</i>	
INCREASING ECONOMIC VALUE OF MONDOL AND THORN STINGRAY SKIN THROUGH THE PROCESSING OF COMMERCIAL LEATHER CREATIVE PRODUCTS	698
<i>L Sahubawa, A Pertiwiningrum</i>	
THE DIVERSITY OF ECHINODERM IN SARANGAN BEACH, GUNUNG KIDUL, YOGYAKARTA.....	704
<i>N Andilala, F B R Khalallia, S E Maharani, P H Ramadhani, A M Huda, A F Putri, B Alda, G Salsabila, M Irfan, S R Ramadhanti, S L Nafiah, R Epilurahman</i>	
MANGROVE ECOSYSTEM FOR SUSTAINABLE TOURISM IN DAMPIER STRAIT MARINE PROTECTED AREA RAJA AMPAT	712
<i>F Yulianda, Y Kaber, D G Bengen, R Dahuri</i>	
THE IMPROVEMENT OF SURVIVAL RATE OF LAND HERMIT CRABS COENOBITA (MALACOSTRACA: COENOBITIDAE) IN ARTIFICIAL HABITAT THROUGH MULTISPECIES AND NICHE HETEROGENEITY APPROACH	723
<i>R A Hutagalung, R Adrian, D Prasasty</i>	
FISHING TRIAL USING A PORTABLE FISH AGGREGATING DEVICE (FAD) IN THE INDIAN OCEAN.....	728
<i>R Yusfiandayani, M Nurilmala, Nurjanah, A Abdullah, M F A Sondita, R Mualim, A Kusdinar, H Choerudin</i>	
PHYSIOLOGICAL RESPONSE AND QUALITY OF RED TILAPIA OREOCHROMIS SP. IN THE CULTURE SYSTEM USING LEMNA (LEMNA PERPUSSILA) AS PHYTOREMEDIATOR.....	734
<i>K Nirmala, L Widia, Y P Hastuti, W Nurussalam, I A Fauzi</i>	
EVALUATION OF PHYSIOLOGICAL RESPONSES AND PRODUCTION PERFORMANCE OF SPINY LOBSTER WITH DIFFERENT DENSITY TREATMENTS IN FLOATING NET CAGE	747
<i>E Supriyono, D Lesmana, K Nirmala, K Adiyana, N A R Setyawidati</i>	
Author Index	