

# 2009 Annual Meeting Program

Papers to be presented at the 42nd Annual Meeting in Tokyo, October 10–12, 2009

## Oral Presentations

(Each presentation has been allowed 15 min, i.e. 12 min for presentation and 3 min for questions; \*speakers)

October 10 (Saturday)

**Oral Presentation Room # 1** (Lecture Hall)

### Ecology and Early Life History

- 1 09:00– Reproductive biology of the three species of genus *Dasyatis* in Ariake Bay. Keisuke *FURUMITSU\** and Atsuko *YAMAGUCHI*
- 2 09:15– The respiration method of the Manta Ray (*Manta birostris*). Minoru *TODA\**, Keiichi *UEDA*, Senzo *UCHIDA*, and Hiroaki *SOMA*
- 3 09:30– Gut contents of Longheaded Eagle Ray *Aetobatus flagellum* captured in the coastal water of Okayama Prefecture. Yoshinori *KAMEI\**, Masami *HAMAGUCHI*, and Yasuhisa *KAYANO*
- 4 09:45– Larval and juvenile fishes collected by light trap in Palau. Toshiaki *MORI\**, Jiro *SAKAUE*, and Takashi *ASAHIDA*
- 5 10:00– Settlement habitat choice by *Chaetodon supeculum*. Sosuke *OGURI\**, Youhei *NAKAMURA*, Tomonori *HIRATA*, Shiori *HIRATA*, and Kosaku *YAMAOKA*

<Short Break>

### Ecology and Ontogeny

- 6 10:30– Feeding competition among four stream-dwelling fishes in the Kamo River, Mie Prefecture. Daisuke *ISHIZAKI\**, Taiga *YODO*, and Motoi *YOSHIOKA*
- 7 10:45– Fish assemblage changes in spring ponds in the Shigenobu River watershed: effects of bank improvement and exotic fish. Ryota *KAWANISHI\**, Yuka *FUJIWARA*, Yuki *UCHIDA*, Yoshifumi *SUMIZAKI*, and Mikio *INOUE*
- 8 11:00– Analysis on spawning migration of Lake Biwa fishes by the stable isotope ratios. Takuya *ITO\**, Yosuke *YURA*, Uniro *KAWASHIMA*, Atsushi *MARUYAMA*, and Masahide *YUMA*
- 9 11:15– Predation of parasite's eggs by host's juveniles in an interspecific brood parasitic system of fishes. Hideyuki *YAMANE\**, Katsutoshi *WATANABE*, and Yoshikazu *NAGATA*
- 10 11:30– Long-term cultured cells derived from early embryos of rose bitterling. Takayoshi *UEDA\**

<Lunch Break>

### Ecology and Conservation

- 11 13:30– Reproductive ecology and life history of bitterling *Tanakia tanago* in situ preservational pond. Jyun-ichi *KITAMURA\**, Jyun *ASHIZAWA*, Ryosuke *YOSHIZAWA*, and Sayaka *KAMEDA*
- 12 13:45– The life history differences in *Hemigrammocyppris rasborella*, among local populations of irrigation ponds. Noriyasu *SUZUKI\**, Emi *HATAKEYAMA*, Kousuke *TAKAKU*, Yasushi *HARADA*, and Masayoshi *MAEHATA*
- 13 14:00– Present status of conservation of *Rhodeus ocellatus kurumeus* population in Nara Prefecture. Ryota *NOGUCHI\**, Ken *MATSUBAYASHI*, Ken-ichi *HONDO*, and Tadao *KITAGAWA*
- 14 14:15– Environmental factors evaluation and population size estimation of *Lefua echigonia* in a small stream at Shima Region, Mie Prefecture. Takahiro *ISHIGURO*, Taiga *YODO\**, and Motoi *YOSHIOKA*
- 15 14:30– Propagation and migration of *Pseudobagrus tokiensis* in an artificial pond for ecological research. Naoyuki *SUGURO\**, Shun *ANZAI*, and Kazumi *HOSOYA*
- 16 14:45– Larvae and juveniles of *Leptoderma lubricum* and *L. retropinnum* (Alepocephalidae) collected from the epibenthic layer of the submarine canyon of Suruga Bay, with notes on adult's reproductions. Munehiro *TAKAMI\** and Atsushi *FUKUI*

<Short Break>

### Ecology and Physiology

- 17 15:15– Spawning condition of the Ryukyu-ayu *Plecoglossus altivelis ryukyuensis* in Amami-oshima Island. Tetsuya *TSURUTA\**, Shin-ichiro *ABE*, Toshihiko *YONEZAWA*, and Kei'ichiro *IGUCHI*
- 18 15:30– Effects of particle size distribution of suspended sediments on Ayu. Keiko *MURAOKA\**, Kunihiko *AMANO*, Takahide *DOI*, Hitoshi *KUBOTA*, and Jyunji *MIWA*
- 19 15:45– Successful population establishment of nonnative rainbow trout under the presence of native masu salmon. Koh *HASEGAWA\**, Toshiaki *YAMAMOTO*, and Shigeru *KITANISHI*
- 20 16:00– Sperm activity of charr harboring in stream habitats fragmented by weirs. Kei'ichiro *IGUCHI\**, Shoichiro *YAMAMOTO*, and Tomoyuki *NAKAMURA*
- 21 16:15– Reproductive ecology of salmonid fish, Sakhalin taimen (*Hucho perryi*) in the Kushiro river, Hokkaido, Japan: interrelationships of periods for reproduction, spawning points and pair male selected by three female in 2005–2009. Eishige *KOMIYAMA\**
- 22 16:30– Dynamics of juvenile Masu Salmon in small tributary with many spawning beds. Yuki *TANAKA\**, Jun *ASHIZAWA*, Takehiko *UENO*, and Takashi *MARUYAMA*

October 11 (Sunday)

Oral Presentation Room # 1 (Lecture Hall)

## **Ethology and Ecology**

- 23 09:00– Changes in characteristics of descendents from an outcrossing between two clonal strains of the self fertilizing mangrove killifish. Atsuko *KURAKAKE\**, Yoshitaka *SAKAKURA*, and Atsushi *HAGIWARA*
- 24 09:15– Optimal conditions for observation of mating behavior between male and hermaphrodite of the self-fertilizing mangrove killifish. Masanobu *MURAYAMA\**, Yoshitaka *SAKAKURA*, and Atsushi *HAGIWARA*
- 25 09:30– Occurrence of copulating species and non-copulating species within a genus, *Icelus*. Hiroyuki *MUNEHARA\**, Takuzou *ABE*, Yasunori *KOYA*, and Osamu *TSURUOKA*
- 26 09:45– Method of fishing using live bait fish of largemouth bass. Osamu *KATANNO\** and Hiroyuki *SAKANO*
- 27 10:00– Behavioral ecology on reproduction of bluegill in the Sainokami Pond, Mie Prefecture. Yuji *IKEDA\**, Taiga *YODO*, and Motoi *YOSHIOKA*

<Short Break>

## **Ecology and Conservation**

- 28 10:30– The increasing factor of Florida large mouth bass gene in Lake Biwa population examined by genetic structure analysis. Yuki *IKEDA\**, Taisuke *KURAMOTO*, Hideyuki *TAKAGI*, Taishi *ITO*, Kei *TORII*, Jun *TAKEBAYASHI*, Taiga *YODO*, and Tadao *KITAGAWA*
- 29 10:45– The increasing factor of Florida large mouth bass gene in Lake Biwa population inferred from growth rates. Taisuke *KURAMOTO\**, Hideyuki *TAKAGI*, Taishi *ITO*, Kei *TORII*, Yuki *IKEDA*, Jun *TAKEBAYASHI*, Taiga *YODO*, and Tadao *KITAGAWA*
- 30 11:00– The effect of young-of-year bluegill (*Lepomis macrochirus*) on feeding selectivity of *Pseudorasbora parva* and *Rhinogobius* sp. OR in small pond. Jun *ASHIZAWA\**, Ayana *SHINOHARA*, Dai *TAKEUCHI*, and Takashi *MARUYAMA*
- 31 11:15– Enhancement of the fishing efficiency of bluegill *Lepomis macrochirus*, by a decoy trap. Yasufumi *FUJIMOTO\**, Kiyotaka *TAKAHASHI*, Kentaro *SINDO*, and Hidenobu *YAMBE*
- 32 11:30– Effects of control methods of large mouth bass *Micropterus salmoides* and bluegill *Lepomis macrochirus* utilizing water level drawdown in dam reservoirs. Tomonori *OSUGI\**, Shoji *FUNABASHI*, Kazumasa *KUMAZAWA*, Kazuhiro *AZAMI*, and Shigekazu *NAKAZAWA*

<Lunch Break>

## **Ecology and Systematics**

- 33 13:30– The reproductive biology of zoarcoid fishes: parental habitats and evidences of copulation. Takuzo *ABE\**, Tomoyuki *YAMANAKA*, and Hiroyuki *MUNEHARA*
- 34 13:45– Interrelationship of the genus *Gymnogobius* based on the osteology. Hiroki *YAMAUCHI\**, Kazumi *HOSOYA*, and Hiroshi *KOHNO*
- 35 14:00– Taxonomic review of the gobiid genus *Drombus* from Japan. Koichi *SHIBUKAWA\** and Toshiyuki *SUZUKI*
- 36 14:15– Comparative osteology and myology in fishes staying in semi-terrestrial environments: a case study in

*Periophthalmus argentilineatus* (Gobiidae) and *Andamia tetradactylus* (Blenniidae). Masanori NAKAE\*, Gento SHINOHARA, Keiichi MATSUURA, Naohide NAKAYAMA, and Kunio SASAKI

- 37 14:30– Ontogenetic intervals of *Gymnogobius breunigii* based on the development of swimming and feeding functions. Ryo UGAWA\*, Masato MOTTEKI, and Hiroshi KOHNO

<Short Break>

### Physiology and Early Life History

- 38 15:00– Respiratory vasculatures of the mudskipper, *Periophthalmodon schlosseri* (Gobiidae: Oxudercinae). Atsushi ISHIMATSU\*, Tomas GONZALES, Masaya KATOH, and Mazlan GHAFFAR
- 39 15:15– Opportunistic migration of Flat-headed Goby as determined by otolith strontium to calcium ratio–Difference of migrating pattern caused by river mouth structure–. Taichi MIURA\*, Hiroyuki YAMADA, Tsuguo OTAKE, and Nobuyuki AZUMA
- 40 15:30– Larval dispersal strategy of gobioid fishes inhabiting streams in the Ryukyu Archipelago. Ken MAEDA\*, Nozomi YAMASAKI, and Katsunori TACHIHARA
- 41 15:45– Morphology and behavior of gobioid larvae which influence larval dispersal. Masashi KONDO\*, Ken MAEDA, Nozomi YAMASAKI, and Katsunori TACHIHARA

October 12 (Monday)

**Oral Presentation Room # 1** (Lecture Hall)

### Ecology and Ethology

- 42 09:00– Comparison of two *Pempheris* species in Okinawa-jima Island. Keita KOEDA\* and Katsunori TACHIHARA
- 43 09:15– Annual fluctuation of fish larvae and juveniles in the inner part of Ariake Bay. Yuta YAGI\*, Keigo TAKEUCHI, Izumi KINOSHITA, Shinji FUJITA, and Yoshio KAWAMURA
- 44 09:30– Female control of paternity in a cooperatively polyandrous cichlid. Masanori KOHDA, Yoshimi MAKINO, Dik HEG, Tomohiro TAKEYAMA, Jun-ya SHIBATA, Katsutoshi WATANABE, Michio HORI, Hiroyuki MUNEHARA, and Satoshi AWATA\*
- 45 09:45– Interspecific variation in spawning time of labrid fishes at the reef edge of Iriomote Island. Tetsuo KUWAMURA\*, Shohei SUZUKI, and Teppei SAGAWA
- 46 10:00– Spawning behavior and sex change of cales, *Heteroscarus acroptilus* and *Olisthops cyanomelas* (Odacidae). Hiroshi KAWASE\* and Tomoki SUNOBE
- 47 10:15– Reproductive condition and sex ratio of billfishes in the tropical area of eastern North Pacific Ocean. Tamaki SHIMOSE\*, Hiroshi ASHIDA, and Kotaro YOKAWA

October 10 (Saturday)

**Oral Presentation Room # 2** (Lecture Room 32)

## Fauna and Molecular Genetics

- 48 09:00– Species diversity of Japanese freshwater fishes and homogenization of their regional faunas. Katsutoshi *WATANABE\** and Koji *TOMINAGA*
- 49 09:15– Geographical distribution pattern of genuine freshwater fish in Kyushu Island. Jun *NAKAJIMA\**, Norio *ONIKURA*, and Yukihiro *SHIMATANI*
- 50 09:30– About newly established fish specimens collection of Seikai National Fisheries Research Institute (SNFR). Kouichi *HOSHINO\** and Yoshinobu *KONISHI*
- 51 09:45– Fish fauna of the outer moat of Nintokuryo Tumulus in Sakai City, Osaka. Daisuke *KAWASHIMA \**, Naotaka *YOSHIMURA*, Tetsuya *IKEDA*, Kouichi *KAIDUKA*, and Yoshinobu *KUROHARA*
- 52 10:00– Sensory drive speciation by water depth. Yohey *TERAI\**, Ryutaro *MIYAGI*, Shinji *MIZOIRI*, Mitsuto *AIBARA*, Semvua *MZIGHANI*, Tohru *SUGAWARA*, Hiroo *IMAI*, and Norihiro *OKADA*

<Short Break>

## Systematics and Distribution

- 53 10:30– Taxonomic review of *Apristurus sinensis* and related species from the Indo-Pacific Ocean (Chondrichthyes, Carcharhiniformes, Scyliorhinidae). Junro *KAWAUCHI\**, Keiichi *SATO*, Kazuhiro *NAKAYA*, and Mamoru *YABE*
- 54 10:45– Morphological variation of intermediate and beta cartilages of claspers in squaloid sharks. Kenta *SUDA\**, Kazuhiro *NAKAYA*, and Mamoru *YABE*
- 55 11:00– Morphological and molecular characters of *Anguilla luzonensis*. Shun *WATANABE\**, Jun *AOYAMA*, Rhodora *AZANZA*, and Katsumi *TSUKAMOTO*
- 56 11:15– A worm eel, *Scolecenchelys okamurai* (Machida and Ohta, 1996), a junior synonym of *Scolecenchelys borealis* (Machida and Shiogaki, 1990). Kazuo *HOSHINO\**, Seishi *KIMURA*, and Yoshihiko *MACHIDA*
- 57 11:30– Distribution, abundance and growth characteristics of *Coilia nasus* larvae and juveniles in the surf zone of the Yangtze River estuary. Junsheng *ZHONG\**, Ke-ke *GE*, Mei-qin *WU*, Izumi *KINOSHITA*, and Shenglong *ZHAO*

<Lunch Break>

## Systematics and Molecular Genetics

- 58 13:30– Phylogenetic analysis of *Iquius nipponicus* Jordan, 1919 (Teleostei, Cyprinidae) from the Miocene freshwater beds of Iki Island, Nagasaki, Japan. Yoshitaka *YABUMOTO\** and Yoko *SAKAMOTO*
- 59 13:45– Koi's specimens collected in Japan by P. F. von Siebold and H. Bürger. Hiroshi *SENOU\**, Kohji *MABUCHI*, and Mutsumi *NISHIDA*
- 60 14:00– Mitogenomic supermatrix approach to resolve Cypriniformes Tree of Life. Masaki *MIYA\**, Tetsuya *SADO*, Kenji *SAITOH*, and Mutsumi *NISHIDA*
- 61 14:15– Taxonomic position of a Korean cyprinid *Abbottina springeri*. Seigo *KAWASE\**, Chi-hong *KIM*, and Kazumi *HOSOYA*

- 62 14:30– Introduction of Kawamutsu chub “from the Yoshino River system to the Yamato River system through the Yoshinogawa Diversion Cannel.” Yukiko *ANZAI\**, Fumiko *ISHII*, Reika *ITOU*, Naoto *KOYAMA*, and Tadao *KITAGAWA*
- 63 14:45– Genetic population structure of the dark chub *Nipponocypris temminckii*, based on mitochondrial DNA sequence. Yasushi *TANAKA\** and Shingo *SEKI*

<Short Break>

### **Morphology and Molecular Phylogeny**

- 64 15:15– The development of the intestine and the feeding habits of *Acheilognathus longipinnis*. Hitomi *YAMANO\**, Rikiya *OGAWA*, Yoshikazu *NAGATA*, and Kazumi *HOSOYA*
- 65 15:30– Cephalic lateral line systems of the cypriniform family Gyrinocheilidae. Hiroaki *TAKEUCHI\** and Kazumi *HOSOYA*
- 66 15:45– Genetic research on distribution of alien loaches in Japan. Yota *FUJII\**, Hiroaki *MARUYAMA*, Yasushi *HARADA*, and Tadao *KITAGAWA*
- 67 16:00– Origin of the two major mitochondrial DNA lineages included in Japanese mud loach *Misgurnus anguillicaudatus*. Tadao *KITAGAWA\**, Yota *FUJII*, and Noriyuki *KOIZUMI*
- 68 16:15– Multiple maternal origins for the Japanese allotetraploid spined loach, *Cobitis* sp. yamato complex. Shohei *KASHIWAGI\**, Makoto *TAKENO*, and Tadao *KITAGAWA*
- 69 16:30– A new form of *Cobitis stirata* complex with mitochondrial DNA derived from *Cobitis biwae*, found in northern Kyoto, Japan. Makoto *TAKENO\**, Shohei *KASHIWAGI*, and Tadao *KITAGAWA*

October 12 (Sunday)

**Oral Presentation Room # 2** (Lecture Room 32)

### **Molecular Genetics and Taxonomy**

- 70 09:00– Evolution and conservation of *Lefua* loaches. Junichi *MIYAZAKI\**, Toshio *TAMURA*, Manabu *DOBASHI*, and Takayuki *MORISAWA*
- 71 09:15– Habitat and population size of *Lefua echigonia* based on genetic diversity. Hiroshi *AIKI\**, Aya *IKEDA*, Toshifumi *WATANABE*, Kazuki *OSATO*, Nobuhiro *MANO*, Hitomi *HIROSE*, Naoyuki *SUGURO*, Fumio *HIGUCHI*, Noriyuki *KOIZUMI*, and Hiroshi *KOMAKI*
- 72 09:30– Taxonomic review of the southern Asian air sac catfish *Heteropneustes fossilis* (Siluriformes: Heteropneustidae). Sahat *RATMUANGKHWANG\** and Prachya *MUSIKASINTHORN*
- 73 09:45– A rare pearlfish *Tetragondacnus spilotos* (Carapidae) from deep water off Muroto, Kochi Prefecture, Japan. Takeshi *YAMAKAWA\** and Yoshihiko *MACHIDA*
- 74 10:00– Rapid morphological changes of the freshwater threespine stickleback, “hariyo”, caused by introgressive hybridization with introduced threespine stickleback. Tomoyuki *KOKITA\**, Shigefumi *KANAOKA*, and Seiichi *MORI*

<Short Break>

### **Morphology and Systematics**

- 75 10:30– Developmental osteology of Macroramphosidae. Yohko *TAKATA\**, Emi *YOSHIDA*, and Kunio *SASAKI*
- 76 10:45– Genetic and morphological differences between *Sebastes vulpes* and *S. zonatus* from Noto, Ishikawa Prefecture and Miyako, Iwate Prefecture. Nozomu *MUTO\**, Yoshiaki *KAI*, Tsutomu *NODA*, and Tetsuji *NAKABO*
- 77 11:00– An undescribed species of the scorpionfish genus *Sebastapistes* (Scorpaenidae) from Chiba and Kochi Prefectures, Japan. Hiroyuki *MOTOMURA\**, Masahiro *AIZAWA*, and Hiromitsu *ENDO*
- 78 11:15– Genetic divergence between species of *Sebastes*. Satoshi *IGATA\**
- 79 11:30– Taxonomic status of two platycephalid species of the genus *Onigocia* described by Weber (1913). Hisashi *IMAMURA\**

<Lunch Break>

### **Distribution and Systematics**

- 80 13:30– Phylogeography of Siberian sculpin, *Cottus sibiricus*. Ryota *YOKOYAMA\**, Valentina G. *SIDELEVA*, and Akira *GOTO*
- 81 13:45– Verification of monophyly for genera in *Arteidiellus* group (Perciformes: Cottidae). Ryo *INAGAWA\** and Mamoru *YABE*
- 82 14:00– An undescribed liparids, *Careproctus* sp., collected by deep-sea water pump of Rausu in Shiretoko Peninsula. Keisuke *MACHI\**, Takahiro *NOBETSU*, and Mamoru *YABE*
- 83 14:15– Phylogeography of the Blacktip Grouper with comments on its cryptic lineages and complex genetic structure under the influence of the Kuroshio Current. Kaoru *KURIIWA\**, Satoru N. *CHIBA*, Hiroyuki *MOTOMURA*, and Keiichi *MATSUURA*
- 84 14:30– Morphological changes with growth, differences between sexes and those between habitats in largemouth bass *Micropterus salmoides*. Koji *YOKOGAWA\**

<Short Break>

### **Taxonomy and Morphology**

- 85 15:00– Revision of *Decapterus kurroides* species group (Percoidae: Carangidae)–I. Seishi *KIMURA\**, Kazuma *KATAHIRA*, and Kaoru *KURIIWA*
- 86 15:15– The visual accommodation system of archerfish. Yosuke *NAKANO\**, Tatsuya *UEYAMA*, Naoyuki *YAMAMOTO*, and Hiroaki *SOMIYA*
- 87 15:30– Undescribed species of genus *Lycenchelys* (Perciformes: Zoarcidae) collected from abyssal zone near the Japan Trench. Gento *SHINOHARA\**
- 88 15:45– Sexual dimorphism and taxonomy of two zoarcoid fishes in the Shiretoko Peninsula. Tomoyuki *YAMANAKA*, Takahiro *NOBETSU*, and Mamoru *YABE\**

October 12 (Monday)

**Oral Presentation Room # 2 (Lecture Room 32)**

**Taxonomy and Molecular Genetics**

- 89 09:00– Validity of two *Trichonotus* species and an undescribed species. Eri *KATAYAMA\** and Hiromitsu *ENDO*
- 90 09:15– New phylogenetic relationships of the family Uranoscopidae. Veera *VILASRI\**, Hisashi *IMAMURA*, and Mamoru *YABE*
- 91 09:30– Genetic population structure of *Siganus spinus* along the Kuroshio Current. Kensuke *IWAMOTO\**, Chih-wei *CHANG*, Tetsuo *YOSHINO*, and Hideyuki *IMAI*
- 92 09:45– Genetic diversity and heterogeneity in broodstock populations of bluefin tuna. Yuya *SHIGENOBU\**, Kazunori *KUMON*, Takuma *SUGAYA*, Takanori *KOBAYASHI*, Kenji *SAITOH*, Satoshi *SHIOZAWA*, and Kazuhiro *NAKAJIMA*
- 93 10:00– Review of the genus *Chascanopsetta* (Bothidae) collected from the eastern Indian Ocean. Kunio *AMAOKA\** and Toshio *KAWAI*
- 94 10:15– Multiplex PCR-based genotyping of mitochondrial DNA from two *Mola* species in Japanese waters. Yusuke *YAMANOUE\**, Kohji *MABUCHI*, Etsuro *SAWAI*, Hiroaki *HASHIMOTO*, and Mutsumi *NISHIDA*

**Poster Presentations**

(Core-time: 12:30–13:30 on October 10 for odd-numbered papers and on October 11 for even-numbered papers;

\*corresponding authors)

**Poster Presentation Room #1 (Lecture Room 31)**

- 95 Lamprey larvae as a niche constructor: verification of substratum movement and environmental modification by *Lethenteron japonicum* and Northern form of *L. reissneri* larvae. Hokuto *SHIRAKAWA\**, Seiji *YANAI*, and Akira *GOTO*
- 96 Cryptic species of the gobioid genus *Schindleria* from Palau. Takeshi *KON\**, Tetsuo *YOSHINO*, and Mutsumi *NISHIDA*
- 97 Distribution pattern and life history of *Pseudorasbora parva* in northern Kyushu Island, Japan. Norio *ONIKURA\**, Jun *NAKAJIMA*, Yoshiko *SUGIMOTO*, Hiromi *KOUNO*, and Jun *KANETO*
- 98 The relationships between the appearance patterns of *Gymnogobius breunigii* and *G. uchidai*, and the physical conditions on the coasts of northern Kyushu Island. Ryutei *INUI\**, Katsuhisa *EGUCHI*, Norio *ONIKURA*, Takashi *NISHIDA*, Motoyoshi *KAWAGISHI*, Masaya *NAKATANI*, and Shin *OIKAWA*
- 99 Molecular phylogeography of the *Dentex* species in the Northwestern Pacific. Satoru *CHIBA\** and Naoto *HANZAWA*



- 100 The lateral line and its innervation in three gobioid species. Ryu *ASAOKA\** and Kunio *SASAKI*
- 101 Revision of the peristediid genus *Satyrichthys*. Toshio *KAWAI\**
- 102 Heritabilities and genetic correlations of abdominal vs. caudal vertebral numbers in the medaka. Shinya *KISO\** and Kazunori *YAMAHIRA*
- 103 Life stage-dependent habitat use by loach *Misgurnus anguillicaudatus* in Sado Island. Kei *SAITOU\**, Jun *NAKAJIMA*, Tsuneo *SEKIJIMA*, Yukihiko *SIMATANI*, and Yoichi *KAWAGUCHI*
- 104 A hemiclinal reproduction of hybrids among the three species of *Hexagrammos*. Motoko *KIMURA\**, Syuiti *ABE*, Katsutoshi *ARAI*, Masakado *KAWATA*, and Hiroyuki *MUNEHARA*
- 105 Comparative morphology of testis in Cottidae. Yasunori *KOYA\**, Youichi *HAYAKAWA*, and Hiroyuki *MUNEHARA*
- 106 Substratum preferences of larvae and juveniles in the marine sculpins. Keita *SAKAI*
- 107 Two species of the genus *Acantholiparis* (Liparidae) from off the Pacific coast of northern Japan. Akio *INOUE\** and Hiromitsu *ENDO*
- 108 Distribution and habitats of *Carassius auratus* in the Ryukyu Archipelago: comparison between domestic and introduced populations. Mikumi *TAKADA\**, Katsunori *TACHIHARA*, and Mutsumi *NISHIDA*
- 109 Spatial variation of fishes in relation to environmental variables in pools on tidal mudflats in Tokyo Bay. Kouki *KANO\**, Daisuke *OKAZAKI*, Toshihiro *YOKOO*, Takashi *INOUE*, Hitoshi *IMAI*, Hikari *KOBAYASHI*, and Hiroshi *KOHNO*
- 110 Microhabitat selection of halfbeak larvae and juveniles in the littoral zones in Lake Kitaura. Seiji *USUI\**, Kouki *KANO*, Kazunori *ARAYAMA*, and Ryoji *NAKAZATO*
- 111 Two mitochondrial lineages in *Ditrema jordani* (Perciformes: Embiotocidae) from the Pacific coast of southern Japan. Hiroshi *KATAFUCHI\**, Yoshiaki *KAI*, and Tetsuji *NAKABO*
- 112 An undescribed species of the genus *Hoplichthys* (Hoplichthyidae) collected from Tosa Bay, Japan. Yuki *NAGANO\**, Hiromitsu *ENDO*, and Mamoru *YABE*
- 113 A review of taxonomic characters of *Neolamprologus niger* and *N. obscurus* in Lake Tanganyika (Perciformes, Cichlidae). Ryohei *OKADA\**, Kazuhiro *NAKAYA*, and Mamoru *YABE*
- 114 First record of a ophidid fish, *Brotulotaenia nielsenii* (Teleostei: Ophidiiformes), collected from off Miyagi Prefecture, Japan. Shinpei *OHASHI\**, Hisashi *IMAMURA*, and Mamoru *YABE*
- 115 Taxonomic study of genus *Anisarchus*, and first record of *A. medius* from Japan. Tomoyuki *YAMANAKA\** and Mamoru *YABE*
- 116 Spawning behavior sequence in *Sarcocheilichthys* fishes that use mussels as spawning substrates. Takefumi *KOMIYA\** and Tadamichi *MORISAKA*
- 117 Phylogeography of a Japanese pale chub, *Zacco platypus*. Akari *HAYAKAWA\**, Kenji *TAKAMURA*, Jun *NAKAJIMA*, Youichi *KAWAGUCHI*, Norio *ONIKURA*, and Takahiko *MUKAI*
- 118 Morphological differences of two *Mola* species occurring around Japanese waters. Etsuro *SAWAI\**, Yusuke *YAMANOUE*, Yoichi *SAKAI*, and Hiroaki *HASHIMOTO*
- 119 Riverine fish fauna in the southern Izu Peninsula. Noriyuki *TAKAI\**, Akifumi *KATO*, Masaomi *UEKUSA*, Yuko

- KIMURA, Takashi SUGIMOTO, Sayaka SUZUKI, Tetsuya HIRAOKA, Shiro ITOI, and Kiyoshi YOSHIHARA
- 120 Detection of Pacific and Sea of Japan groups in *Chaenogobius annularis* based on mtDNA phylogenetic analysis. Shotaro HIRASE\*, Minoru IKEDA, Manami KANNO, and Akihiro KIJIMA
- 121 Polymorphism of migratory behavior in *Gnathopogon caeruleus* in the Lake Biwa water system: stable isotope approach. Hiroki KUMADA\*, Tomoyuki KOKITA, and Noboru OKUDA
- 122 Environmental characteristics of mud skipper *Periophthalmus modestus* in a new habitat (artificial tideland: Higashinagisa Kasaikaihin Park). Shingo TANABE\*, Hiroshi HASHIMOTO, and Masato IKEDA

**Poster Presentation Room #2 (Lecture Room 33)**

- 123 An undescribed species of the cottid genus *Daruma* from Tosa Bay. Osamu TSURUOKA\*, Naohide NAKAYAMA, and Mamoru YABE
- 124 Taxonomic review of the *Careproctus rastrinus* species complex from the western North Pacific. Yoshiaki KAI\*, Keiichi SAKAI, James W. ORR, and Tetsuji NAKABO
- 125 Distribution and spawning ground of *Ischikauia steenackeri* in northern Kyushu Island. Takeshi OHATA\*, Ryutei INUI, Takashi IHARA, Jun NAKAJIMA, and Norio ONIKURA
- 126 Two undescribed species of the genus *Alepocephalus* (Alepocephalidae) collected from the Indian Ocean, off Indonesia. Mitsumi YAMAMOTO\*, Hisashi IMAMURA, and Mamoru YABE
- 127 An undescribed *Glossanodon* species from southern Japan (Argentinidae). Hiromitsu ENDO\* and Kazuya NASHIDA
- 128 Food sources for post-larval *Hemigrammocypripis rasborella* in the irrigation ponds. Emi HATAKEYAMA\*, Noriyasu SUZUKI, Kousuke TAKAKU, and Yasusi HARADA
- 129 Sexual dimorphism of *Asthenomacrus victoris*, with comments on its Japanese records. Naohide NAKAYAMA\* and Hiromitsu ENDO
- 130 Asymmetry of genetic population structure of two amphidromous species of the middle egg type of *Cottus pollux* and the small egg type of *Cottus pollux*, based on mitochondrial DNA sequence data. Hideharu TSUKAGOSHI\*, Ryota YOKOYAMA, and Akira GOTO
- 131 Temporal changes in the number of captured individuals and species composition of bitterlings in Lake Kasumigaura. Takahiro MOROSAWA\*
- 132 Habitat of four *Gymnogobius* species in Tokai area. Yousuke SUZUKI\*, Kazuki ARAO, and Tadashi KITANO
- 133 Contamination of *Pseudobagrus nudiceps* in the type specimens of *P. aurantiacus*. Tomohiko FUJITA\*, Martin OIJEN, and Kazumi HOSOYA
- 134 Distribution of four *Gymnogobius* species in Tokai area. Kazuki ARAO\*, Yousuke SUZUKI, and Tadashi KITANO
- 135 Latitudinal variation in courtship behavior and mate preference of the medaka. Takeshi SASAKI\* and Kazunori YAMAHIRA
- 136 Decreasing process of the populations of Japanese charr (*Salvelinus leucomaenis*) in Okumusashi region. Yuya

SAITO\*

- 137 Larval and juvenile fish community in Ohashi River linking Lake Shinji and Nakaumi Lagoon. Toshihiro YOKOO\*, Masahiro HORINOUCI, and Futoshi ARANISHI
- 138 An undescribed species of the genus *Gymnothorax* (Muraenidae) from Ogasawara Islands. Kiyotaka HATOOKA\* and Hiroshi SENOU
- 139 Bi-directional sex change in the harem hawkfish *Cirrhitichthys falco* (Cirrhitidae). Tatsuru KADOTA\*, Jun OSATO, Ken NAGATA, Hiroaki HASHIMOTO, and Yoichi SAKAI
- 140 Mitochondrial phylogenomics of the Labeoninae (Cyprinidae). Tetsuya SADO\*, Kenji SAITOH, Mutsumi NISHIDA, and Masaki MIYA

**Poster Presentation Room #3 (Lecture Room 35)**

- 141 Cytogenetics of Lake Victoria cichlids: finding of the B chromosomes and this function. Kouta YOSHIDA\*, Asato KUROIWA, Yohey TERAJ, Shinji MIZOIRI, Mitsuto AIBARA, Hirohisa HIRAI, Yuriko HIRAI, Naoki KOBAYASHI, Youichi MATSUDA, and Norihiro OKADA
- 142 Supportive breeding of the endangered bitterling *Tanakia tanago* by taking maintenance of genetic diversity into consideration. Hitoshi KUBOTA\*, Tadayuki SAKAI, Takeo TAKAHASHI, and Katsutoshi WATANABE
- 143 Seasonal changes of zooplankton density and composition in Lake Kasumigaura. Atsushi TOMINAGA\* and Kazunori ARAYAMA
- 144 Daily age of metamorphosis, otolith microchemistry and migrating routes about Japanese eel elvers at coastal region of China. Wenqiao TANG\*, Kai WEI, Hong-yi GUO, Zheng-li XIE, and Toshihiro ISHINABE
- 145 Population genetic structure of *Coilia mystus* in coastal water of southeast China. Jinqun YANG\*, Xuelan YAN, Wenqiao TANG, and Toshihiro ISHINABE
- 146 The population genetic structure in *Anguilla japonica* based on mtDNA D-loop gene. Xiaolong GONG\*, Sifa LI, and Toshihiro ISHINABE
- 147 Habitat selection of two serranid species in an Okinawan coral reef. Atsushi NANAMI\* and Yoshimasa AONUMA
- 148 Habitat environment and life-history of striped spined loach (*Cobitis* sp. S Tokai form) around the paddy field in Gifu Prefecture, Japan. Ayako TANAKA\* and Takahiko MUKAI
- 149 Range extension of *Stegastes insularis* (Perciformes: Pomacentridae) known as a relic species. Mikio WATAI\*, Yasuhiro MORITA, and Hiroshi SENOU
- 150 Phylogenetic relationships of Leuciscinae: phylogenetic position of the genus *Oreoleuciscus* based on mitogenomes. Junichi IMOTO\*, Kenji SAITOH, Jun ADACHI, Takeshi SASAKI, Yuri KARTAVTSEV, Satoru CHIBA, Ryo GOTOH, Masaki MIYA, Mutsumi NISHIDA, and Naoto HANZAWA
- 151 The relationships between morphological variation and habitat characteristics in Japanese fluvial sculpin, *Cottus pollux* (LE). Takaharu NATSUMEDA\*, Tetsuya TSURUTA, Hirohiko TAKESHIMA, and Kei'ichiro IGUCHI
- 152 Growth, maturation and age composition of the golden venus chub *Hemigrammocypripis* in an irrigation pond, Shiga Prefecture. Kosuke TAKAKU\*, Xi-xi ZHU, Noriyasu SUZUKI, Emi HATAKEYAMA, and Yasushi

HARADA

- 153 Genetic analysis of the genus *Lefua* from the West Japan. Toshio TAMURA\*, Mari MOCHIDUKI, Koji TOJO, and Jun-ichi MIYAZAKI
- 154 Developmental stages of Antarctic myctophid *Electrona antarctica* collected off Syowa Station. Eri TSUJIMURA\*, Masato MOTTEKI, and Takashi ISHIMARU
- 155 On two types of *Pseudocaranx dentex* (Teleostei: Carangidae) from Japan. Tatsuki MATSUMOTO\*, Yoshiaki KAI, and Tetsuji NAKABO
- 156 Feeding habits in the Japan Sea and Pacific Ocean forms of threespine stickleback. Manabu KUME\*, Chiharu TORII, and Seiichi MORI
- 157 Phylogeography and morphological variation of *Squalidus chankaensis* (Cyprinidae). Ryo KAKIOKA\* and Katsutoshi WATANABE
- 158 Community structure of larval and juvenile fishes in the estuary of inner part of Suruga Bay. Takaaki TAMAI\* and Atsushi FUKUI

**Poster Presentation Room #4** (Lecture Room 41)

- 159 The present condition of ordinary charrs live habitats in Abukuma highlands. Osamu INABA\*, Takashi MARUYAMA, and Yuya SAITO
- 160 Life history of *Hemigrammocyppris rasborella* in farm ponds of Tokai area. Kazuki ARAO and Junji SHIMOYAMA\*
- 161 Genetic variation between wild and released *Sebastes oblongus* populations in Seto Inland Sea. Osamu TOMINAGA\*, Takuto YOSHIDA, Motohide TOCHINO, Katsuhiko MIKI, and Hiroshi MIYAUCHI
- 162 Verification of a character Hotoke-dojo loach gravitates toward spring water a experiment. Takumi MORIYAMA\*
- 163 Spawning habitat and an attempt to eliminate of smallmouth bass *Micropterus dolomieu* in the Naka River system in Tochigi Prefecture. Tadayuki SAKAI\*, Korenori TAKEDA, Yutaka YOSHIDA, and Hisao ISHIJIMA
- 164 External morphology of the freshwater goby *Luciogobius* sp.3 from Shizuoka Prefecture. Naoyuki KANAGAWA\* and Takahiko ITAI
- 165 Male ornamentation in a sex-role reversed pipefish, *Corythoichthys haematopterus*. Atsushi SOGABE\*, Koji MATSUMOTO, and Yasunobu YANAGISAWA
- 166 Effects of seasonal changes in physical environments on activity and microhabitat-selection of temperate stream fishes. Hikaru NAKAGAWA\* and Katsutoshi WATANABE
- 167 Genetic identification of native population of amago salmon *Onchorhynchus masou ishikawae* in Shizuoka Prefecture. Naomasa KAWASHIMA\*, Tsuguhito SHIMOMURA, and Tetsuya AKUTSU
- 168 Record of new host species, *Lefua echigonia*, for the glochidia of the freshwater unionid mussel *Inversiunio jokohamensis*. Toshishige ITOH\*, Wataru KAKINO, Yutaka YOSHIDA
- 169 Phylogeography of the gudgeon *Pseudogobio esocinus* species complex. Koji TOMINAGA\*, Jun NAKAJIMA, and Katsutoshi WATANABE

- 170 The genetic variation of *Rhinogobius* sp. YB among the Ryukyu Islands. Akira *KAWAGUCHI\** and Tetsuo *YOSHINO*
- 171 Fine-scale local adaptation revealed by field observation, genetic analysis and common-garden experiments. Itsuro *KOIZUMI\**
- 172 Seasonal changes of freshwater fish fauna caught by traditional fish trap "Eri" in Lake Biwa, Shiga Prefecture. Shigefumi *KANAOK\**, Masayoshi *MAEHATA*, Hiroichi *SAWADA*
- 173 Genetic diversity of the Taiwanese bitterlings. Hirokazu *MASHIKO\**, Hitoshi *KUBOTA*, and Takayoshi *UEDA*
- 174 Conservation genetics of Kyusyu populations in *Rhodeus ocellatus kurumeus*. Takuya *MIYAKE\**, Kouichi *KAWAMURA*, Jun *NAKAJIMA*, and Norio *ONIKURA*
- 175 Environmental factors affecting the occurrence of larvae and juveniles of fishes in sandy beaches of outer Tokyo Bay, central Japan. Kazunori *ARAYAMA\**, Sekio *SHINAGAWA*, Hiroshi *KOHNO*, Masato *MOTEKI*, and Toshihiro *YOKOO*
- 176 Taxonomic study of larval rajid fishes from north Japan. Satoshi *OKUNO\**, Kazuhiro *NAKAYA*, and Mamoru *YABE*
- 177 Fish occurrence of south origin from Kadogawa Bay, Miyazaki Prefecture. Hikaru *IZUMI\**, Masaaki *WADA*, Fumiya *TANAKA*, Ayumi *YAMANE*, and Yukio *IWATSUKI*
- 178 A comparative study on the structure of the epidermis of an amphibious mudskipper fish, *Scartelaos gigas* (Gobiidae, Teleostei) from Korea, on different parts of the body and the appendages. Jong-young *PARK*, Min-gi *OH*, and Chi-hong *KIM\**

**Poster Presentation Room #5 (Lecture Room 43)**

- 179 The teeth and external characters of *Dentex*, *Cheimerius*, *Pagrus*, *Argyrops* and *Evygnis* of the family Sparidae. Fumiya *TANAKA\** and Yukio *IWATSUKI*
- 180 Phylogenetic relationships of the Liparidae based on the complete mtDNA sequences. Takashi *SATOH\**, Masaki *MIYA*, Tetsuya *SADO*, Asako *MATSUMOTO*, Alan *JAMIESON*, Toyonobu *FUJII*, Peter *MØLLER*, and Mutsumi *NISHIDA*
- 181 An undescribed species of the genus *Apristurus* from New Zealand waters, with notes on the taxonomy of related species. Keiichi *SATO\**, Andrew *STEWART*, and Kazuhiro *NAKAYA*
- 182 Seasonal change in the composition of fish larvae and juveniles occurring in the nearshore zones of Lake Kasumigaura. Hiromi *HANZAWA\**, Kazunori *ARAYAMA*, and Atushi *TOMINAGA*
- 183 An undescribed species of the genus *Enneapterygius* (Perciformes: Tripterygiidae) from Yakushima Island, Kagoshima, Japan. Masatoshi *MEGURO\**, Shigeru *HARAZAKI*, and Hiroyuki *MOTOMURA*
- 184 Morphological and molecular differences between two geographic populations of the mottled spinefoot *Siganus fuscescens*, from Nagasaki and Okinawa Prefectures. Naoki *YAGISHITA\**, Keiichi *INOUE*, Takanari *KIRIYAMA*, Taku *YOSHIMURA*, and Atsuko *YAMAGUCHI*
- 185 Central gustatory pathways in goldfish. Takeshi *KATO\**, Hiroaki *SOMIYA*, and Naoyuki *YAMAMOTO*

- 186 Population genetic analysis of Atherinidae fish inhabiting marine lakes on Palau Islands based on homologous microsatellite markers in Acanthopterygii. Ryo *GOTOH\** and Naoto *HANZAWA*
- 187 Genetic diversity and population structure of the fourspine sculpin, *Cottus kazika* based on mitochondrial DNA control region. Naoya *ISHIGURO\**, Tomohiro *MASADA*, and Daisuke *TAHARA*
- 188 Genetical and biogeographical differences of electoric transport system activity and swimming activity in medaka fish. Akiko *OKABE\**, Daisuke *MIYASHITA*, and Nobuyuki *AZUMA*
- 189 Geographical variation of mtDNA of a minnow, *Pseudorasbora parva*, in Japan. Takahiko *MUKAI\**, Mayu *KONISHI*, Katsutoshi *WATANABE*, Yosuke *TAKEUCHI*, Jun *NAKAJIMA*, Youichi *KAWAGUCHI*, Norio *ONIKURA*, and Keisuke *TAKATA*
- 190 Genetic population structure of *Acanthogobius hasta* based on mitochondrial DNA analysis. Kouji *NAKAYAMA\**, Choongh *JEONG*, Woo-Seok *GWAK*, and Tetsuji *NAKABO*
- 191 Haemulid, mullid, holocentrid fishes from Miyazaki Prefecture. Ayumi *YAMANE\** and Yukio *IWATSUKI*
- 192 Studies on the food habits of mudskipper *Periophthalmus modestus* at Edogawa Canal, Tama River in Tokyo Bay. Shogo *TAI\**, Shigeru *AOKI*, Ken *OKAMOTO*, and Mitsuhiko *SANO*
- 193 Genetic structure of the Rock bream around Japan, with mitochondrial DNA. Megumi *KAWAKAMI\**, Kosuke *KUDO*, and Yukio *IWATSUKI*
- 194 Ultrastructure of hatching larvae of *Aulichthys japonicus* and when do the larvae come out from the ascidians? Machiko *AOKI\**, Izumi *AKAGAWA*, and Masako *HARA*
- 195 Morphological and ecological features of *Kichulchoia brevifasciata* (Pisces, Cobitidae). Eun-Jin *KIM\** and Ik-Soo *KIM*
- 196 Sexual maturity and morphology of eggs and larvae of *Scartelaos gigas*. Jin Koo *KIM\**, Hae Ja *BAEK*, Dae Soo *CHANG*, and Joo *IL*
- 197 Identification of the two ophichthid leptocephalus from East/Japan Sea. Hwan Sung *JI* and Jin Koo *KIM*

## Lecture of the awardees

October 11 (Sunday)

17:00–17:30

**Oral Presentation Room # 1** (Lecture Hall)

New perspectives on the history of East Asian fish fauna based on molecular phylogenetic analyses: lessons from the studies of the labrid genus *Pseudolabrus* and native Japanese common carp.

Kohji *MABUCHI\**

# Symposia

October 12 (Monday)

11:00–18:30

**Symposium Room #1** (Lecture Hall)

## Domestic alien species of fishes in Japan: present aspects and problems

Organized by Takahiko *MUKAI*, Taiga *YODO*, Kouichi *KAWAMURA*, Norio *ONIKURA*, and Hiroshi *SENOU*

1 11:00–11:20 What is domestic alien species?

Hiroshi *SENOU*\*

2 11:20–11:40 Distribution patterns of several domestic aliens in the creeks along the Sea of Ariake, Kyushu Island, Japan.

Norio *ONIKURA*\*, Jun *NAKAJIMA*, Mayumi *SATO*,  
Yoichi *KAWAGUCHI*, and Takahiko *MUKAI*

3 11:40–12:00 Ecological impacts of domesticated common carp (*Cyprinus carpio*) on freshwater community and ecosystem.

Shin-ichiro S. *MATSUZAKI*\*

<Lunch Break>

4 13:00–13:20 From *Pseudorasbora pumila pumila* to *P. parva*—asymmetrical hybridization and species replacement—.

Mayu *KONISHI*\* and Keisuke *TAKATA*

5 13:20–13:40 Genetic introgression in bitterlings by anthropogenic introduction.

Takuya *MIYAKE*\* and Kouichi *KAWAMURA*

6 13:40–14:00 Artificial introduction of haplotypes of Lake Biwa into those of the Kanto Plain in the freshwater fish *Zacco platypus*.

Kenzi *TAKAMURA*\* and Mayuko *NAKAHARA*

7 14:00–14:20 Genetic disturbance in native medaka populations caused by himedaka (orange-red type commercial strain) observed in the Yamato River system.

Naoto *KOYAMA* and Tadao *KITAGAWA*\*

8 14:20–14:40 Fisheries and conservation management of white-spotted charr *Salvelinus leucomaenis* in the Lake Biwa water system.

Takeshi *KIKKO*\*

<Short Break>

9 15:00–15:20 Transplantation of marine fish and shellfish in Japanese fisheries.

Kōji *YOKOGAWA*\*

10 15:20–15:40 Future aspects of Japanese inland fisheries.

Takashi *MARUYAMA*\*

11 15:40–16:00 Marketing situation of Japanese freshwater fish in Shiga Prefecture.

Shigefumi *KANAŌ*\*

12 16:00–16:20 Will local ordinances control domestic translocations of fish, a case of Shiga Prefecture?

Katsuki *NAKAI*\*

13 16:20–16:40 Conservation units: essentials, practice, and guidelines.

Katsutoshi *WATANABE*\*

<*Short Break*>

14 17:00–18:30 Discussion



**Symposium Room #2** (Lecture Room 32)

**Adaptive divergence in Japanese native fishes: patterns, mechanisms and  
ecological genomic perspectives**

Organized by Tomoyuki *KOKITA* and Kazunori *YAMAHIRA*

- 1 12:40–13:00 Detection methods in adaptive divergence for ichthyological research.  
Tomoyuki *KOKITA*\* and Kazunori *YAMAHIRA*
- 2 13:00–13:30 Progress report on population comparison of sex-biased mortality rate and adult body size in sea-run masu salmon, *Oncorhynchus masou*: the expected geographic patterns.  
Tsuyoshi *TAMATE*\*
- 3 13:30–14:00 Ever-adapting fishes in an ever-changing lake: a mechanism for endemic species diversification in Lake Biwa inferred from *Sarcocheilichthys* fishes.  
Takefumi *KOMIYA*\* and Katsutoshi *WATANABE*
- 4 14:00–14:30 Adaptation for breeding environment: ecological divergence and reproductive isolation in threespine sticklebacks.  
Manabu *KUME*\*, Jun *KITANO*, and Seiichi *MORI*
- 5 14:30–15:00 Adaptation of hybrids in the hybrid zone between boreal and temperate species of *Hexagrammos* generic species.  
Motoko *KIMURA*\* and Hiroyuki *MUNEHARA*
- <Short Break>
- 6 15:10–15:40 Adaptive evolution in a fluctuating marine environment: genome scan to detect candidate regions involved in adaptive divergence between two lineages of ice goby.  
Tomoyuki *KOKITA*\*
- 7 15:40–16:10 Exploring genes for local adaptation in ayu by using extensive gene expression profiling.  
Hirohiko *TAKESHIMA*\*
- 8 16:10–16:40 Genome-wide QTL mapping for traits related to phenotypic diversity among *Takifugu* species.  
Kiyoshi *KIKUCHI*\*, Wataru *KAI*, Sho *HOSOYA*, Shinichi *KIDO*, Hiroaki *SUETAKE*, and Yuzuru *SUZUKI*
- 9 16:40–17:10 Evolution of olfactory receptor gene families in Japanese natural populations of threespine stickleback.  
Yasuyuki *HASHIGUCHI*\* and Mutsumi *NISHIDA*
- 10 17:10–17:40 Climatic adaptation in life history of the medaka: perspectives and problems to ecological genomics.  
Kazunori *YAMAHIRA*\*
- <Short Break>
- 11 17:50–18:30 Discussion

11:00–18:00

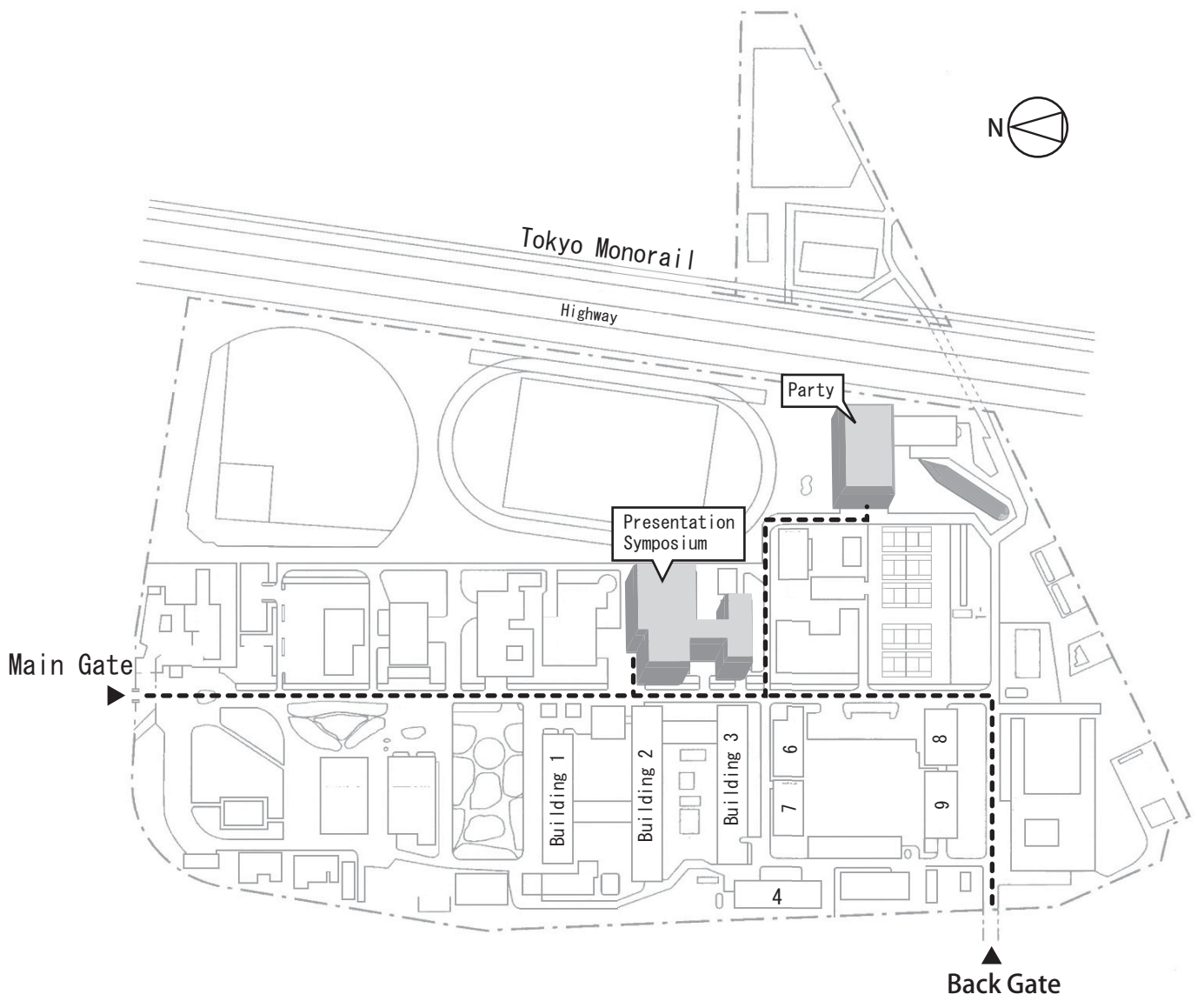
**Symposium Room #3** (Lecture Room 34)

## Saving fishes from global warming

### –The challenge for ichthyologists–

Organized by Noboru *OKUDA* and Mutsumi *NISHIDA*

- 1 11:00–11:10 Opening address  
Mutsumi *NISHIDA*\*
- 2 11:10–11:40 Predictions of changes in geographical distribution patterns of salmonid fishes due to climatic warming, with special reference to charrs in Japanese Archipelago.  
Koji *MAEKAWA*\*
- 3 11:40–12:10 Seasonal and interannual variation of subtidal fish assemblages in Wakasa Bay revealed by underwater visual census with reference to the warming trend in the Sea of Japan.  
Reiji *MASUDA*\*
- 4 12:10–12:40 Direct and indirect effects of global warming on coral reef fishes.  
Mitsuhiko *SANO*\*
- <Short Break>
- 5 13:30–14:00 Fish genes regulating temperature adaptation.  
Michiaki *YAMASHITA*\*
- 6 14:00–14:30 Reasons for why white-spotted charr may disappear due to global warming.  
Yoshinori *TANIGUCHI*\* and Yôichi *KAWAGUCHI*
- 7 14:40–15:10 Influence of water temperature to the early life history of Ryukyu-ayu (*Plecoglossus altivelis ryukyuensis*).  
Tei *KISHINO*\* and Akihiko *SHINOMIYA*
- 8 15:10–15:40 Prediction of ecological influences of global warming on the three-spined stickleback in Spring-fed Waters.  
Seiichi *MORI*\*
- 9 15:40–16:10 Global warming leads to the collapse of a pelagic goby *Isaza* endemic to Lake Biwa.  
Noboru *OKUDA*\*, Yoichiro *SAKAI*, and Michio *KUMAGAI*
- <Short Break>
- 10 16:20–16:40 Vulnerability of large lakes to climate warming—A case study in Lake Biwa.  
Toshi *NAGATA*\*
- 11 16:40–17:00 A perspective of the studies on effects of climate warming on freshwater fish.  
Akira *GOTO*\*
- 12 17:00–18:00 Discussion



**HOW TO REACH “SHINAGAWA CAMPUS OF TOKYO UNIVERSITY OF MARINE SCIENCE AND TECHNOLOGY”**

- 10 minute walk from the Konan Exit of JR Shinagawa Station to the Main Gate, crossing the Mitate Bridge
- 10 minute walk from the Tokyo Monorail Tennōzu Isle Station to the Back Gate, crossing the Fure-ai Bridge

