

Illyrian Coastal Exploration Program 2014 Scientific Diving Course

Tečaj znanstvenog ronjenja u okviru Programa istraživanja ilirske obale 2014.

The Illyrian Coastal Exploration Program (ICEP) conducted scientific diving courses adhering to American Academy of Underwater Sciences (AAUS) standards in the southeastern Europe during the 2012 and 2013 summer field seasons. These courses were offered through a partnership with the Albanian Center for Marine Research in Sarandë, Albania, and brought together international students and researchers to participate in the first scientific diving training in the country. At the beginning of the 2014 summer field season in Croatia, ICEP offered a two-week intensive Scientific Diving Course through the International Centre for Underwater Archaeology (ICUA) in Zadar. The course was directed by Derek Smith as head instructor and his staff, together with Dr. Luka Bekić and ICUA archaeologists Mladen Pešić, Marina Šimičić, and Roko Surić, all of whom participated as course instructors and as Croatian representatives during all field operations.

2. Some of the exercises are organized at islands near Zadar / Neke su vježbe organizirane na otocima u blizini Zadra (photo: D. Smith)



1. Pool practice at Višnjik pool, Zadar / Vježba u bazenu u Višnjiku, Zadar (photo: D. Smith)

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U okviru Programa istraživanja ilirske obale (Illyrian Coastal Exploration Program, ICEP) tijekom terenskog rada u ljetnim sezonama 2012. i 2013. u jugoistočnoj Europi provedeni su tečajevi znanstvenog ronjenja u skladu sa standardima Američke akademije za podvodne znanosti (American Academy of Underwater Sciences – AAUS). Ti su se tečajevi nudili u okviru partnerstva s Albanskim centrom za istraživanje mora u Sarandë u Albaniji, a okupili su međunarodne studente i istraživače koji su sudjelovali u prvoj obuci znanstvenog ronjenja u toj zemlji. Na početku terenskog rada u ljetnoj sezoni 2014. u Hrvatskoj ICEP je ponudio dvotjedni intenzivni tečaj znanstvenog ronjenja u Međunarodnom centru za podvodnu arheologiju (MCPA) u Zadru. Tečaj je vodio Derek Smith kao glavni instruktor i njegovo osoblje, zajedno s dr. Lukom Bekićem i arheolozima MCPA Mladenom Pešićem, Marinom Šimičić i Rokom Surićem, koji su sudjelovali kao instruktori tečaja i kao hrvatski predstavnici tijekom aktivnosti na terenu.

Jedinstveni aspekt tečaja bio je da se postupalo u skladu sa standardima znanstvenog ronjenja Američke akademije za podvodne znanosti (AAUS) i zajedničkim praksama za priznavanje europskih razina kompetencija za znanstveno ronjenje na radu Europskog odbora za znanstveno ronjenje (European Scientific Diving Panel – ESDP). Omogućeno je i priznanje Australazijskog programa za akreditaciju ronionca (Australasian Diver Accreditation Scheme – ADAS) kroz

The unique aspect of the course was that it adhered to both the American Academy of Underwater Sciences (AAUS) Standards for Scientific Diving and the European Scientific Diving Panel (ESDP) Common Practices for Recognition of European Competency Levels for Scientific Diving at Work. Recognition from the Australasian Diver Accreditation Scheme (ADAS) was also made possible through instruction and assessment by a representative of ADAS during the course. At the time of writing, the authors know of no other course that has effectively allowed recognition of the students' scientific diver training across three continents - a first ever course to meet all of the criteria of the international standards and offer this comprehensive outcome. This model can be applied to future international course offerings and helps lay the groundwork for a common worldwide scientific diving training standard.

Staff and students originating from Australia, Austria, Croatia, Cyprus, England, Estonia, Germany, Scotland, and the United States came together for the course, including the current Presidents of the ESDP and AAUS and the Training and Assessment Coordinator from ADAS. Upon completion of all requirements, the students were certified as AAUS Scientific Divers and ESDP European Scientific Divers as well as receiving recognition of training from ADAS. The ESDP certifications were the first issued through the Coordination of Scientific Divers of Croatia, the national organization created to oversee the training and administration of scientific divers in Croatia.

The course exposed students to a variety of habitat types found along the northern Croatian coastline and introduced them to best practices for conducting hypothesis-based research, environmental survey, and archaeological methods. Students completed twenty dives during the two-week course and ex-

3. Practicing diver first aid on board Rava / Vježba pružanja prve pomoći ronioncu na brodu Rava (photo: D. Smith)



upute i procjene koje je tijekom tečaja proveo predstavnik ADAS-a. U trenutku pisanja ovog teksta autori nisu znali ni za kakav drugi tečaj u okviru kojega je stvarno omogućeno priznanje obuke studenata za znanstveno ronjenje na tri kontinenta – ovo je uopće bio prvi tečaj koji je ispunio sve kriterije međunarodnih standarda i ponudio ovaj sveobuhvatni ishod. Ovaj se model može primijeniti na buduće međunarodne ponude tečajeva i pomaže u postavljanju temelja za zajednički svjetski standard obuke za znanstveno ronjenje.

Na tečaju su se okupili osoblje i studenti iz Australije, Austrije, Hrvatske, Cipra, Engleske, Estonije, Njemačke, Škotske i Sjedinjenih Država, uključujući aktualne predsjednike ESDP-a i AAUS-a te koordinatore za obuku i procjenu iz ADAS-a. Nakon uspješno završenog tečaja studenti su certificirani kao Znanstveni ronionci prema standardima AAUS-a i Europski znanstveni ronionci prema standardima ESDP-a te su primili priznanje ADAS-a o obavljenoj obuci.



4. Night dive practice near Zadar / Vježba noćnog ronjenja u blizini Zadra (photo: D. Smith)

Certifikati ESDP-a bili su prvi certifikati izdani preko Koordinacije znanstvenih ronilaca Hrvatske, nacionalne organizacije osnovane za nadzor obuke i koordinacije znanstvenih ronilaca u Hrvatskoj.

U okviru tečaja studenti su upoznati s raznolikošću vrsta staništa uzduž sjeverne hrvatske obale te su im predstavljene najbolje prakse za provođenje istraživanja koja se temelje na pretpostavkama, istraživanja okoliša te arheološke metode. Studenti su tijekom dvotjednog tečaja obavili dvadeset zarona i iskusili široki raspon ronilačkih tehnika i okolina poput scenarija spašavanja, vađenja, vođenja hitnih akcija u

perienced a wide range of diving techniques and environments such as rescue scenarios, extractions, emergency diving accident management, navigation techniques, search and light salvage, habitat quantification, assessment of fish populations, artifact and site recording, deeper and night diving considerations, tethered diver and communication operations, and blue water diving techniques.

Despite the fast-paced and rigorous nature of the diving schedule, all ICEP programs seek to balance field logistical experience with high-level academic coursework designed for graduate and undergraduate students conducting their own research and leading their own scientific diving teams. The students learned academic modules in classroom sessions taught by experts in the field from a range of national and international institutions. Academic topics included diving physics and physiology, decompression theory, dive tables and computers, physical and biological oceanography, marine geology and ecological site formation, hazardous marine life identification and prevention of injuries, enriched air nitrox theory and application, equipment maintenance and field repair, and science communication and social media relations.

The students and staff of the 2014 ICEP Scientific Diving Course came from diverse academic and technical backgrounds to form a truly integrated, multi-disciplinary training effort. We would like to thank Luka, Mladen, Marina, and Roko, as well as the rest of the ICUA Zadar, for hosting this year's course. Special thanks to students Kelsey Dwyer, Maria Ktori, Ernie Steven Lopez, Carmen Tania Obied, Jack Pink, Maili Roio, Anya Rutter, David Selmo, Megsie Siple, Esther Unterweger, and Svenja Weise.

slučaju nezgoda pri ronjenju, navigacijskih tehnika, potrage i spašavanje pod svjetlom, kvantitativne procjene morskih staništa, procjena ribljih populacija, evidentiranje predmeta i nalazišta, značajki dubljeg i noćnog ronjenja, vezanog ronilaca i komunikacije te tehnika ronjenja u dubokim vodama.

Usprkos brzom i strogom ritmu rasporeda ronjenja, svi programi ICEP-a nastoje uskladiti logističko iskustvo na terenu i akademski rad na visokoj razini namijenjen diplomskim i preddiplomskim studentima koji provode vlastita istraživanja i vode vlastite timove znanstvenih ronilaca. Studenti su akademske module učili na predavanjima u učionicama koje su vodili stručnjaci u tom području iz niza domaćih i međunarodnih institucija. Akademske teme uključivale su fiziku i fiziologiju ronjenja, teoriju dekompresije, tablice ronjenja i računala, fizičku i biološku oceanografiju, geologiju mora i oblikovanje ekološkog lokaliteta, identifikaciju opasnih morskih organizama i sprečavanje ozljeda, teoriju i primjenu obogaćenog zraka (nitroksa), održavanje opreme i popravke na terenu te znanstvenu komunikaciju te odnose s društvenim medijima.

Studenti i osoblje ICEP-ovog Tečaja znanstvenog ronjenja različitog akademskog i tehničkog iskustva ovaj su tečaj učinili uistinu integriranim i multidisciplinarnim. Željeli bismo zahvaliti Luki, Mladenu, Marini i Roku i svima ostalima u MCPA-i u Zadru za njihovo domaćinstvo ovogodišnjeg tečaja. Posebno se želimo zahvaliti studentima Kelsey Dwyer, Mariji Ktori, Ernieju Stevenu Lopezu, Carmen Taniji Obied, Jacku Pinku, Maili Roio, Anyi Rutter, Davidu Selmou, Megsie Siple, Esther Unterweger i Svenji Weise.

4. 2014 Zadar Scientific diving course students and instructors / Studenti i instruktori tečaja znanstvenog ronjenja 2014. u Zadru (photo: D. Smith)

