

## PODVODNA/PODMORSKA ARHEOLOGIJA, ARHEOLOGIJA POMORSTVA I ARHEOLOGIJA BRODA: RAZMATRANJE TERMINOLOŠKIH PITANJA

## UNDERWATER/SUBMARINE, MARITIME AND NAUTICAL ARCHAEOLOGY: DISCUSSING SOME TERMINOLOGICAL ISSUES

Cilj je ovoga rada prikazati povijest terminologije vezane uz znanstvene discipline podvodnu/podmorsku arheologiju, arheologiju pomorstva i arheologiju broda u okviru hrvatske arheološke znanosti, te predložiti moguća rješenja za njihovu buduću klasifikaciju. *Podvodna* i *podmorska arheologija* široko su prihvaćeni tehnički termini kojima se uobičajeno označuju arheološka istraživanja koja se provode u posebnim uvjetima, a za čije je ostvarenje potrebno raspolagati odgovarajućom opremom i alatom. Precizna definicija termina *arheologija pomorstva* i *arheologija broda* omogućuje nam razlikovanje zadataka i ciljeva tih dviju disciplina, pojašnjava njihov znanstveni doprinos unutar matičnoga polja i pruža znatno jasniju percepciju njihovog sadržaja i značenja.

KLJUČNE RIJEČI: *terminologija, podvodna arheologija, podmorska arheologija, arheologija pomorstva, arheologija broda*

### 1. UVOD

Prikladna terminologija čest je problem u svim arheološkim granama hrvatske arheologije, ali dok u nekima ona s uspjehom napreduje prema zadovoljavajućim rješenjima<sup>1</sup>, u drugima se već godinama zapostavlja. Korištenje neprimjerenih termina u stručnoj literaturi lako dovodi do krivih predodžbi, zabuna i nesporazuma, te uvelike koči razvoj znanosti ukorak sa svjetskim trendovima. Upravo takva situacija zadesila je onaj dio arheologije koji se na osnovi svojih istraživanja trebao intenzivnije usmjeriti na proučavanje pomorstva u najširem smislu riječi, a koji do danas nije riješio čak niti pitanje osnovnog naziva svog dijela struke.

The objective of this paper is to review the history of terminology supporting the scientific disciplines of underwater/submarine, maritime and nautical archaeology within the framework of Croatian archaeology, and provide recommendations for future classifications. Underwater archaeology and submarine archaeology are generally accepted technical terms denoting archaeological research conducted under special conditions, and requiring appropriate equipment and tools. Proper definition of terms nautical and maritime archaeology makes it possible to differentiate between the tasks and objectives of the two disciplines and clarify their scientific contributions to archaeology in general, providing a much clearer perception of their content and meaning.

KEY WORDS: *terminology, underwater archaeology, submarine archaeology, maritime archaeology, nautical archaeology*

### 1. INTRODUCTION

Appropriate terminology is a frequent problem in all branches of archaeology in Croatia, but while some branches successfully advance towards sustainable solutions,<sup>1</sup> in others the issue has been neglected for years. This, of course, does not make the problem disappear. The use of inexact or poorly defined terms in professional literature can easily lead to false perceptions, confusion and misunderstandings, and at the same time hinders the development of the science and its ability to keep pace with global trends. This is exactly what has happened in Croatia with regard to archaeology dealing with the study of maritime issues; in fact, the basic problem of defining the gen-

1 Usp. npr. prijedlog rješavanja terminologije paleolitičkih i mezolitičkih nalaza u I. KARAVANIĆ, 1992.

1 Compare e.g. the proposal for solving the terminology of Palaeolithic and Mesolithic finds in I. KARAVANIĆ, 1992.

Terminološke nedorečenosti ili netočnosti u svojoj su biti daleko nadilazile sam problem odabira ispravnih naziva, jer je potraga za dobrom terminologijom bila ustvari potraga za sadržajem i smislom istraživanja podmorskih nalazišta. U zamahu razvoja podmorskih arheoloških istraživanja i organizirane brige o podmorskoj kulturnoj baštini sedamdesetih godina prošloga stoljeća nekoliko se stručnjaka više puta dotaknulo terminoloških problema i nejasnoća te potaklo zanimljive rasprave, nažalost kratkog vijeka. Promjena atmosfere u hrvatskoj arheologiji usmjerenoj na podvodne nalaze, koja se dogodila tijekom osamdesetih godina dvadesetoga stoljeća kad je na račun intenzivne zaštite znanstvena rasprava gotovo potpuno utihnula, dovela je do povratka nekih neprimjerenih termina i izostanka osnovnih definicija potrebnih za daljnji kvalitetan razvoj tog dijela arheološke znanosti.

Pozorni odabir odgovarajućih termina u specifičnom području podmorske i pomorske arheološke problematike može se iščitati iz doktorskog rada Dasena Vrsalovića,<sup>2</sup> iako rad ustvari ne sadrži poseban dio posvećen terminološkoj problematici. Svi znanstveni radovi koji su nakon toga uslijedili koristili su se dijelom Vrsalovićevom terminologijom, a dijelom uvodili svakojake termine bez posebnog obrazloženja. Manji broj radova bio je objavljen na svjetskim jezicima čime se izbjeglo nevolje s prevođenjem nekih osnovnih i općeprihvaćenih, uglavnom engleskih naziva. Tako je hrvatska arheologija koja istražuje pomorsku baštinu ušla u dvadeset i prvo stoljeće nesprijetna za prihvaćanje onoga što se događa u europskoj i svjetskoj znanosti, dobrim dijelom bespomoćna čak i u nastojanju da to prepriča na hrvatskom jeziku.

Uzrok takvome stanju ne treba tražiti u nedostatku hrvatskih termina već u nedovoljnoj zainteresiranosti arheološke struke za korištenjem preciznih izraza za imenovanje predmeta i pojava s kojima se neizbježno susreće, te u nedovoljnoj suradnji sa strukama koje te izraze svakodnevno koriste. Interdisciplinarni pristup ne predstavlja, naravno, univerzalno rješenje za sve probleme, ali omogućuje da se unutar bogatog repertoara termina odabere one koji će pomoći da se na najbolji mogući način izrazi rezultate rada i da se taj rad učini razumljivim

eral terms associated with the field of study has not been adequately addressed.

Vague or inaccurate terminology goes far beyond the problem of selecting correct terms, as the quest for the right terminology is in fact a quest for the content and meaning of the exploration of submarine sites. In the development of submarine archaeological research and organised preservation of submarine cultural heritage in the nineteen-seventies, several experts on a number of occasions tackled terminological problems and ambiguities, initiating interesting discussions which unfortunately were of short duration. In Croatian archaeology directed at underwater finds, the shift in mood that occurred in the nineteen-eighties, as intensive protection almost entirely took the place of scientific dialogue, allowed the continued use of inappropriate terms without the basic definitions necessary to support further development of this area of archaeology.

The careful selection of appropriate terms in specific submarine and maritime archaeology problem areas can be seen in Dasen Vrsalović's doctoral thesis,<sup>2</sup> although the paper actually does not actually contain a separate section dedicated to terminological matters. Subsequent scientific papers used Vrsalović's terminology in some cases, while others introduced various terms without giving specific definitions. A small number of these papers were originally published in international languages, thus avoiding the problem of translating certain basic and generally accepted, mostly English, terms into Croatian. As a result, Croatian archaeology dealing with the study of maritime heritage entered the twenty-first century without the vocabulary to discuss what was happening on the European and global scientific stages, and often without the ability to even paraphrase it in Croatian.

Such a situation is not explained by a lack of Croatian terms, but rather by the insufficient interest of archaeologists in defining and applying accurate terms to denote artefacts and phenomena encountered, as well as by insufficient co-operation with other professions using these terms on a daily basis. An interdisciplinary approach is, of course, not a universal solution to all problems, but it offers many choices from a rich repertoire of terms, enabling

2 D. VRSALOVIĆ 1979. Doktorski rad tiskan je 2011. godine u izdanju izdavačke kuće Književni krug Split, nažalost neopremljen odgovarajućim predgovorom.

2 D. VRSALOVIĆ 1979. This doctoral thesis was printed by the publishing house Književni krug Split in 2011, unfortunately without the adequate preface.

kako stručnoj tako i široj javnosti.<sup>3</sup> Terminološka osnovica predstavlja materijal koji se kroz znanstvenu raspravu može mijenjati i prilagođavati sukladno potrebama i spoznajnim promjenama, a njezino nepostojanje znatno koči, pa čak i onemogućuje napredak istraživanja i kreativnog razmišljanja u određenim segmentima struke.

Cilj je ove rasprave potaknuti razvoj znanstvenih disciplina arheologije pomorstva i arheologije broda putem jasnih terminoloških definicija i odabira prikladnih termina za označavanje određenih sadržaja. Uzimajući u obzir činjenicu da se mnogo puta tijekom povijesti pokazalo kako se nasilnim nametanjem riječi ne može polučiti dugoročan uspjeh, prihvaćanje ponuđenih rješenja najviše će ovisiti o jasnim objašnjenjima njihova sadržaja, te o dosljednom korištenju predloženih termina u stručnoj i znanstvenoj literaturi.<sup>4</sup> Njihovim objašnjenjem mijenja se percepcija zadataka i ciljeva određenih disciplina te pojašnjava njihov znanstveni doprinos unutar matičnoga polja. Time se, naravno, ne isključuje uvriježeno korištenje općeprihvaćenih termina, ali uz mnogo jasniju predodžbu njihovoga značenja.

## 2. TEHNIKA ISTRAŽIVANJA ILI ZNANSTVENA DISCIPLINA

Arheologija usmjerena na istraživanje, zaštitu i očuvanje nalazišta pod površinom vode naziva se *podvodnom arheologijom*. Riječ je o nazivu kojim se obuhvaća kulturno-povijesna baština u moru i u unutrašnjim vodama (rijeke, jezera, močvare i dr.), dok naziv *podmorska arheologija* omogućuje da se interesni prostor omeđi na podmorje i velika riječna ušća (Sl. 1).

Podvodna i podmorska arheologija samo su tehnički termini<sup>5</sup> kojima se označuje arheološka istraživanja koja se odvijaju u posebnim uvjetima te je za njihovo ostvarenje potrebno raspolagati odgovarajućom opremom i alatom. Metodologija podvodnih/podmorskih istraživanja, međutim, u svojim je načelima jednaka metodologiji istraživanja na kopnu pa se shodno tome podvodna/podmorska arheologija nipošto ne izdvaja kao zasebna grana,

clear expression while making concepts comprehensible to both experts and the public.<sup>3</sup> Terminology is something that can be amended and adjusted to current needs and the state of knowledge in the course of scientific dialogue, while the lack of sufficiently clear, concise, and descriptive words hinders or even prevents the progress of research and creative thinking in certain segments of the profession.

The objective of this paper is to advance the scientific disciplines of maritime and nautical archaeology by proposing clarity in definition of terms, to ensure the appropriate terms are selected to denote the appropriate content. Given that many times in the course of history the forceful imposition of words has not proved to be successful in the long-run, acceptance of offered terminological solutions will depend on their clear definition and subsequent usage in professional and scientific literature.<sup>4</sup> Their clarification changes the perception of the tasks and objectives of certain disciplines and highlights their scientific contribution to the field. This in no way proposes to stop or change the conventional usage of generally accepted terms, but to encourage usage with a much clearer idea of their meaning.

## 2. EXPLORATION TECHNIQUE OR SCIENTIFIC DISCIPLINE

Archaeology aimed at the exploration, protection and preservation of sites under the surface of the water is called *underwater archaeology*. It is a term which encompasses cultural heritage in the sea as well as inland waters (rivers, lakes, marshes, etc.), while the term *submarine archaeology* enables the sphere of interest to be restricted to submarine areas and large river deltas (Fig. 1).

Underwater and submarine archaeology are solely technical terms<sup>5</sup> denoting archaeological research taking place under special conditions and requiring specific equipment and tools. Nevertheless, the methodology used in conducting underwater/submarine research applies the same principles as that used in land excavations. As a result, underwater/submarine archaeology by no means represents

3 U tome smislu posebno je problematična terminologija arheologije broda (*cf. infra*), o kojoj će biti riječi u zasebnom radu.

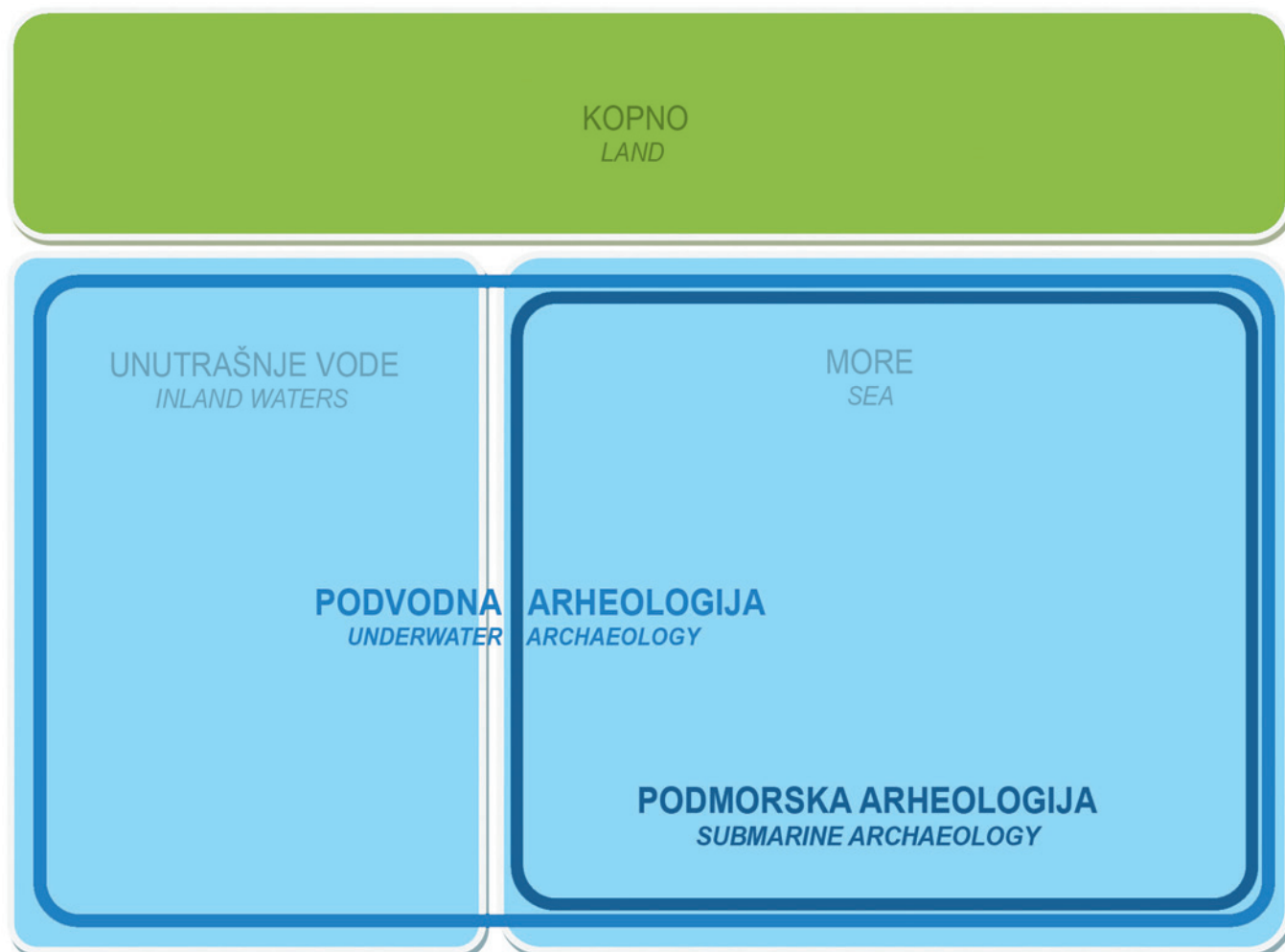
4 Usp. primjer različitih naziva za valove, koji donosi Ž. STEPANIĆ, 2004, 151-152.

5 P. POMEY, E. RIETH, 2005, 10.

3 In this sense, the term *arheologija broda* (*nautical archaeology*), (*cf. infra*), represents a particular problem, which is to be discussed in a separate paper.

4 Compare the example of various Croatian names for waves by Ž. STEPANIĆ, 2004, 151-152.

5 P. POMEY, E. RIETH, 2005, 10.



SL. 1. / FIG. 1.

Područje djelovanja i međusobni odnos podvodne i podmorske arheologije (I. Radić Rossi, M. Barišić).

*The area of work and interrelationship of underwater and submarine archaeology (I. Radić Rossi, M. Barišić).*

već se ovisno o razdoblju kojemu pripada nalazište ona svrstava u prapovijesnu, antičku, srednjovjekovnu ili novovjekovnu arheologiju.<sup>6</sup> Usmjerimo li pozornost na podmorsku arheologiju, područje njenoga interesa obuhvaća sva potonula nalazišta i nalaze neovisno o činjenici je li riječ o ljudskome djelovanju koje se odvija na moru ili u svezi s morem, ili pak o materijalnim ostacima ljudske prošlosti koji su se u moru našli iako s njime nisu izravno povezani.

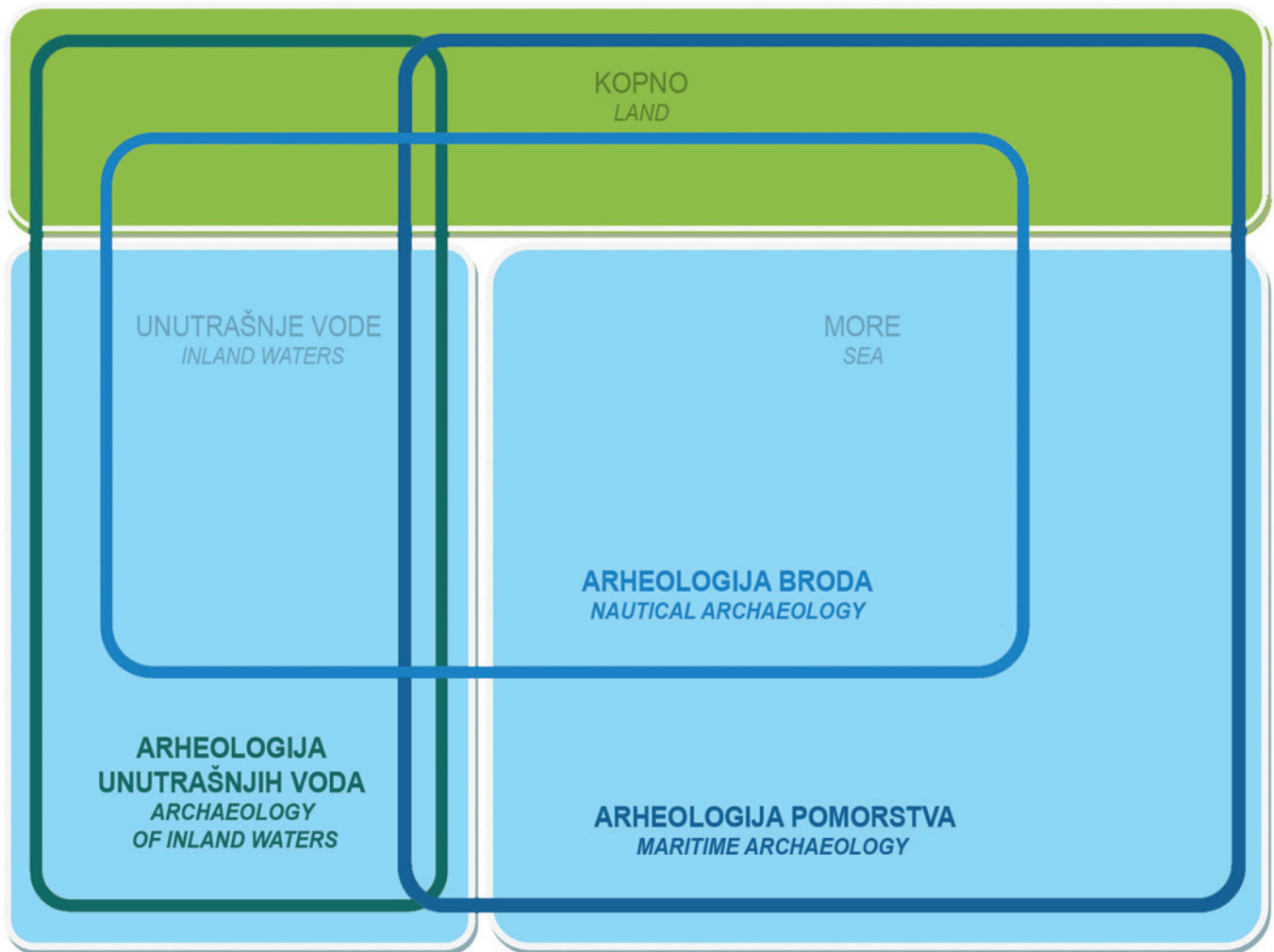
U drugoj spomenutoj skupini nalazi se daleko manje nalazišta nego li u prvoj, na što se već upozorilo stručnu i širu javnost u jednoj od najrani-

a separate branch. On the contrary, depending on the period from which a site dates, it is classified as Prehistoric, Classical Antiquity, Mediaeval or New Age archaeology.<sup>6</sup> Submarine archaeology's area of interest encompasses all submerged sites and finds, including both human activity at sea or connected with the sea, as well as the material remains of the human past which have ended up in the sea although they are not directly connected with it.

The latter of the two groups mentioned above includes significantly fewer sites compared to the former group, as discussed in one of the earliest

6 J. GREEN, 2004, 2; A. BOWENS, 2009, 6.

6 J. GREEN, 2004, 2; A. BOWENS, 2009, 6.



SL. 2. / FIG. 2.

Područje djelovanja i međusobni odnos znanstvenih disciplina arheologije pomorstva, arheologije unutrašnjih voda i arheologije broda (I. Radić Rossi, M. Barišić).

*The area of work and interrelationship of the scientific disciplines of maritime archaeology, the archaeology of interior waters and nautical archaeology (I. Radić Rossi, M. Barišić).*

jih sveobuhvatnih publikacija na temu podvodnih arheoloških istraživanja.<sup>7</sup> Za ilustraciju takvoga razmišljanja mogu se iskoristiti olupine zrakoplova koje su zbog nesretnog slučaja potonule u more i postale predmetom istraživanja podmorske arheologije. One doista u mnogim slučajevima nemaju nikakvih dodirnih točaka s morem i pomorstvom, ali ih je ambijent u kojem se nalaze učinio objektima podmorskih arheoloških istraživanja.<sup>8</sup>

comprehensive publications dealing with underwater archaeological exploration.<sup>7</sup> One good example is the study of aircraft that have sunk in the sea as the result of accidents and become objects of submarine archaeological exploration. Indeed, in many cases these aircraft have no connection to the sea or with maritime activities, but the setting in which they are found turns them into objects of submarine archaeological exploration.<sup>8</sup>

7 K. MUCKELROY, 1978.

8 G. F. Bass predložio je da se proučavanje potonulih zrakoplova uvrsti u arheologiju broda zbog činjenice da je riječ o plovilima koja su namijenjena kretanju zrakom: G. F. BASS, 2011, 4.

7 K. MUCKELROY, 1978.

8 G. F. Bass proposed that the study of sunken aircraft wrecks become part of nautical archaeology, as they are vessels for conveyance, even if designed to operate in the air: G. F. BASS, 2011, 4.

Za ranija razdoblja ljudske prošlosti znatno je manje takvih primjera jer je velika većina predmeta koji se pronalaze u podmorju na neki način povezana s morem i pomorstvom. Ipak, potopljenim prapovijesnim krajolicima iz doba paleolitika i mezolitika potrebno je pristupiti s velikim oprezom zbog toga što se tijekom ledenih doba krajolik bitno mijenjao pa su se naselja čiji se tragovi danas otkrivaju u priobalju nekada mogla nalaziti daleko od morske obale, ne dolazeći s njome u nikakav kontakt. Iako takvih nalazišta za sada nema u hrvatskom podmorju, tj. niti u jednom slučaju nije potvrđeno kako je riječ o materijalu pronađenom *in situ*,<sup>9</sup> nekadašnji izgled jadranskog prostora sugerira veliku vjerojatnost njihovoga postojanja.

Raspravu predstavlja li podvodna ili podmorska arheologija samo tehnički termin kojim se označuje specifičnost uvjeta arheoloških istraživanja ili se odnosi na posebnu granu arheologije može se smatrati završenom. George Bass, stručnjak kojemu je pridijeljena titula oca podvodne arheologije, upozorio je kako se ona ne može izdvajati iz arheologije kao cjeline, a kao zornu ilustraciju takvoga razmišljanja naveo je činjenicu da se arheologija koja se odvija u drugim osebujnim krajolicima poput pustinje, planine ili džungle također ne izdvaja kao zasebna grana.<sup>10</sup> Upravo stoga Bass je svoju prvu publikaciju nazvao *Archaeology under water* (*Arheologija pod vodom*), jasno izrazivši svoj stav u izboru i redosljedu riječi.<sup>11</sup> To ga ipak nije spriječilo da u mnogim kasnijim publikacijama iskoristi termin *podvodna arheologija* kao svima razumljivo kompromisno rješenje kojim se nedvosmisleno iskazuje kako je riječ o nalazištima do kojih se stiže isključivo uz pomoć ronilačke opreme ili posebnih tehničkih pomagala. Epitet oca podvodne arheologije Bass je zaslužio upravo nastojanjem da se na podmorskim nalazištima u cijelosti primijeni arheološka metodologija s kopna, a svojom je osobnom prisutnošću u podmorju uvelike pomogao ostvarenju svoga cilja.

U engleskom jeziku od samoga su se početka počeli miješati različiti termini poput *underwater*, *submarine*, *maritime*, *marine* i *nautical archaeology* koji su se koristili na gotovo ravnopravan način, a mnogi su priručnici na istu temu nosili različita im-

In earlier periods of human history, there are significantly fewer such examples, as a large majority of the artefacts found under the sea are usually in some way related to the sea and to maritime affairs. However, an exciting new area of potential study is the analysis of submerged prehistoric landscapes from the Palaeolithic and Mesolithic periods. Studies of such landscapes, the traces of which are currently being uncovered in coastal areas, will need to be conducted with great care, since landscapes changed greatly during the ice ages, and thus settlements from those times which may have been situated far from the coast, without contact with the sea, today might well be found underwater. Although no such sites have been uncovered in Croatian waters, i.e. in no instance has it been proven that the material was discovered *in situ*,<sup>9</sup> the former appearance of the Adriatic region suggests there is a significant possibility of the existence of such sites.

In fact, the discussion on whether underwater or submarine archaeology represents only a technical term denoting specific conditions under which archaeological excavations are conducted, or whether it is a separate branch of archaeology, is over. George Bass, known as the father of underwater archaeology, warned that underwater archaeology cannot be separated from archaeology as a whole. To illustrate his point, he mentioned the fact that archaeology taking place in other specific landscapes such as deserts, mountains or jungles is not considered to be a separate branch.<sup>10</sup> For this particular reason, Bass named his first published paper *Archaeology under Water*, clearly expressing his point of view in the selection and order of the title's wording.<sup>11</sup> Nevertheless, this did not stop him from using the term *underwater archaeology* in numerous later papers as a widely comprehensible compromise solution which clearly showed that he was dealing with sites that could only be reached with the help of diving equipment or special technical aids. Bass earned the title "the father of underwater archaeology" precisely for his attempts to systematically apply the entire archaeological methodology used on land to underwater sites, and his personal presence under the sea to a great extent helped him accomplish his aim.

9 Podmorsko nalazište iz vremena srednjeg paleolitika pronađeno je u blizini turističkog naselja Resnik u Kaštel Štafliću: Z. BRUSIĆ, 2004; I. KARAVANIĆ, 2009.

10 G. F. BASS, 2003.

11 G. F. BASS, 1966.

9 An undersea site from the mid-Palaeolithic was found near the tourist resort of Resnik in Kaštel Štaflić: Z. BRUSIĆ, 2004; I. KARAVANIĆ, 2009.

10 G. F. BASS, 2003.

11 G. F. BASS, 1966.

ena.<sup>12</sup> Čini se da su u engleskom jeziku terminološke nevolje donekle prisutne i danas.<sup>13</sup>

Prije petnaestak godina u uvodniku časopisa *The International Journal of Nautical Archaeology*<sup>14</sup> pojavio se prijedlog da se sva arheološka istraživanja koja su na bilo koji način povezana s vodom, neovisno o tome odvijaju li se i sama pod vodom ili proučavaju predmete i pojave vezane uz vodu, nazovu zajedničkim imenom *hydroarchaeology*.<sup>15</sup> Takav prijedlog nastao je na osnovi teksta objavljenog godinu dana ranije,<sup>16</sup> u čijem se naslovu našao termin koji se svidio urednici Valerie Fenwick. Njezin je prijedlog iste godine elaborirala Alison Gale, nastojeći korak po korak opravdati njegovu primjenu.<sup>17</sup> Prema autoričinim riječima termin *hydroarchaeology* trebao je postati ne samo dovoljno uopćen termin koji bi pokrio sva polja istraživanja, već i okvir čitave struke.

Zamjerke ostalim terminima prije svega su se ticale njihove ograničenosti na tehniku istraživanja (*underwater archaeology*), vrstu nalazišta (*shipwreck archaeology*) ili predmet istraživanja (*nautical archaeology*). Termin *hydroarchaeology* označavao bi, međutim, dio arheologije na bilo koji način povezan s vodom, neovisno o činjenici je li riječ o predmetu proučavanja (čovjek i njegov svijet), izvorima za proučavanje (svi ljudski tragovi) ili samom procesu proučavanja (otkrivanje kroz interpretaciju). Usprkos detaljnom prikazu svih načina na koji ljudi koriste vodu, alata koji im pri tome služe, aktivnosti koje im u tome pomažu, izvora podataka i arheoloških nalaza u suhom i u mokrom ambijentu te na kraju i procesa istraživanja, obrazloženje opravdanosti termina kojim bi se sve navedeno obuhvatilo u jednu cjelinu očigledno nije postiglo željeni cilj, jer ga do danas nije prihvatio nitko od mjerodavnih stručnjaka.

In English, the usage of various terms such as *underwater*, *submarine*, *maritime*, *marine* and *nautical archaeology* was confused from the start, as they were used almost interchangeably, and numerous handbooks used different names for the same thing.<sup>12</sup> While great strides have been made, some terminological problems in English are still present.<sup>13</sup>

Some fifteen years ago, in an introductory article in *The International Journal of Nautical Archaeology*,<sup>14</sup> a proposal was made that all archaeological research which is in any way related to water, whether it is conducted under the water itself, or whether it studies objects and phenomena related to water, be called *hydroarchaeology*.<sup>15</sup> The proposal was a result of a text published a year before,<sup>16</sup> whose title contained a word which the editor, Valerie Fenwick, liked. In the same year, her proposal was elaborated upon by Alison Gale, who step by step attempted to justify its use.<sup>17</sup> According to the author, the word *hydroarchaeology* should have become not only a generally accepted term to cover all fields of research, but also a general professional reference term.

Objections to other terms were related to their being overly limited, either to the research technique (*underwater archaeology*), the site type (*shipwreck archaeology*) or the object of study (*nautical archaeology*). On the other hand, the expression *hydroarchaeology* would denote that part of archaeology which is in any way connected with water, no matter whether it is the subject of study (man and his world), the source for the study (all traces of man) or the process of study itself (discovery through to interpretation). Despite the detailed argument to subsume under one word all the ways in which people use water, the tools they utilise, the activities that assist them, the sources of information and archaeological finds in dry and wet settings, and also research processes, ultimately the justification to have one expression to encompass all the above was insufficient, and the term *hydroarchaeology* remains unaccepted by authoritative experts.

12 Usp. G. F. BASS, 1972 (*underwater archaeology*), H. FROST, 1962 (*submarine archaeology*), K. MUCKELROY, 1978 (*maritime archaeology*), J. DU PLAT TAYLOR, 1965 i D. BLACKMAN, 1973 (*marine archaeology*). Godine 1972., na inicijativu tijela *Council for Nautical Archaeology* (osnovanoga 1964.) počeo je u Velikoj Britaniji izlaziti *The International Journal of Nautical Archaeology* (*IJNA*) koji danas izdaje *Nautical Archaeology Society* (*NAS*).

13 F. M. HOCKER, 2003, 4.

14 Vidi bilj. 12.

15 V. FENWICK, 1993.

16 G. GAMKRELIDZE, 1992.

17 A. GALE, 1993.

12 Compare G. F. BASS, 1972 (*underwater archaeology*), H. FROST, 1962 (*submarine archaeology*), K. MUCKELROY, 1978 (*maritime archaeology*), J. DU PLAT TAYLOR, 1965 and D. BLACKMAN, 1973 (*marine archaeology*). In 1972, at the initiative of the Council for Nautical Archaeology (established in 1964) the publishing of *The International Journal of Nautical Archaeology* (*IJNA*) commenced in Great Britain, currently published by the *Nautical Archaeology Society* (*NAS*).

13 F. M. HOCKER, 2003, 4.

14 See note 12.

15 V. FENWICK, 1993.

16 G. GAMKRELIDZE, 1992.

17 A. GALE, 1993.

Zanimljivo je da je još mnogo godina ranije na *Savjetovanju o problemima podvodne arheologije*, održanom u Zagrebu 1968. godine, Štefan Mlakar uveo termin *hidroarheologija* u službenu hrvatsku arheološku terminologiju. Održavši uvodno predavanje pod naslovom *Problemi podvodne arheologije – hidroarheologije*, Mlakar je ponudio termin koji se tijekom narednih godina vrlo intenzivno koristio. No, za razliku od sveobuhvatnog prijedloga na engleskom jeziku, *hidroarheologija* se u Hrvatskoj odnosila isključivo na podvodna istraživanja.<sup>18</sup>

Godine 1974. na godišnjoj skupštini Hrvatskog arheološkog društva terminu *hidroarheologija* suprotstavio se Duje Rendić Miočević.<sup>19</sup> Njegova napomena nije bila samo terminološke prirode, nego i kritika općenitog stava kako je u pitanju posebna grana arheologije. Nenad Cambi na savjetovanju u Splitu godinu dana kasnije upozorio je na oprez pri stvaranju i korištenju pojedinih termina, te se usprotivio terminu *hidroarheologija* okarakteriziravši ga lošim i nespretnim.<sup>20</sup> Iz ranijih Cambijevih radova jasno je kako mu se on ustvari nikada nije niti priklonio jer, iako njegov priručnik za ronioce umnožen 1970. godine nosi službeni, očigledno nametnuti naslov *Priručnik za hidroarheološka istraživanja*, u njemu se uglavnom govori o podvodnoj odnosno podmorskoj arheologiji.<sup>21</sup>

Na poticaj koji je svojom primjedbom dao Cambi, u raspravu u Splitu uključili su se Dasen Vrsalović i Štefan Mlakar. Iako je Mlakar pokušao obraniti predloženi termin činjenicom njegovoga stvaranja po uzoru na ostale znanosti koje pri istraživanju "silaze u vodu", te sveobuhvatnošću u odnosu na termin podmorska arheologija, prihvatio je prijedlog njegove zamjene "jednim adekvatnijim izrazom, koji će u punom smislu i detaljnije obuhvatiti, odnosno izraziti djelatnost ove grane arheologije".<sup>22</sup> Dasen Vrsalović, još neodlučan na savjetovanju u Splitu, jasno je u doktorskom radu izrazio svoj stav. U njemu je navedeni termin u potpunosti izostao tj. spomenut je tek jednom kao

It is interesting that many years earlier, at the *Conference on Underwater Archaeology Problems* held in Zagreb in 1968, Štefan Mlakar had introduced the term *hidroarheologija* into official Croatian archaeological nomenclature. In his introductory lecture, entitled *Problemi podvodne arheologije – hidroarheologije (Problems of Underwater Archaeology – Hydroarchaeology)*, Mlakar offered a term which was to be used extensively in the course of the following years. However, unlike the all-embracing proposal in English, in Croatia *hidroarheologija* was related exclusively to underwater excavations.<sup>18</sup>

In 1974, at the annual meeting of the Croatian Archaeological Association, the term *hidroarheologija* was opposed by Duje Rendić Miočević.<sup>19</sup> In his remarks, he not only opposed the terminology, but also the generally held opinion that it represented a separate branch of archaeology. The following year, at a symposium in Split, Nenad Cambi called for caution when coining and using individual terms and cited the expression *hidroarheologija*, characterising it as deficient and clumsy.<sup>20</sup> It is clear from Cambi's earlier works that he had in fact never accepted the expression because, although his handbook for divers, reprinted in 1970, bears the official, clearly imposed, title *Priručnik za hidroarheološka istraživanja (A Handbook of Hydroarchaeological Exploration)*, it mostly deals with underwater or submarine archaeology.<sup>21</sup>

Dasen Vrsalović and Štefan Mlakar also took part in the discussion initiated by Cambi's remarks in Split. Mlakar initially attempted to defend the suggested expression by the fact that it was created following the model of other sciences that carry out part of their research underwater, as well as the fact that, compared to the term *submarine archaeology*, the coinage is all-embracing. However in the end he accepted the proposal to replace it with "a more adequate expression which will fully encompass and express the activity of this branch of archaeology."<sup>22</sup> Still indecisive at the Split symposium, Dasen Vrsalović clearly expressed his opinion in his doc-

18 I. RADIĆ ROSSI, 2005.

19 Rasprava je ukratko zabilježena u izvješću pod nazivom "Godišnji sastanak HAD-a i znanstveni skup Arheološka problematike Like", 24.-26. IX 1974., *Obavijesti HAD-a*, god. VII, br. 1, Zagreb, 1974, 5.

20 PITANJA, 1975, 93.

21 N. CAMBI, 1970.

22 PITANJA, 1975, 94-95.

18 I. RADIĆ ROSSI, 2005.

19 The discussion was briefly noted in a report called "Annual Meeting of the Croatian Archaeological Association and the Symposium on the Archaeological Issues of Lika", 24-26 November 1974, "Notes of the Croatian Archaeological Association", Year VII, No. 1, Zagreb, 1974, 5.

20 PITANJA, 1975, 93.

21 N. CAMBI, 1970.

22 PITANJA, 1975, 94-95.



"izraz koji smo svi zajedno, možda i nesvjesno upotrebljavali".<sup>23</sup> Nakon Vrsalovićeve smrti terminologija je ipak izmakla kontroli pa se u stručnoj literaturi i javnom tisku taj uistinu nespretni termin nastavilo koristiti sve do naših dana.<sup>24</sup>

Termin *hidroarheologija* još bi se donekle i mogao opravdati na način kao što je to učinila Alison Gale tj. činjenicom da predmetak *hidro-* označuje ustvari sve ljudske djelatnosti vezane uz vodu, njihove arheološke tragove (koji se često nalaze na kopnu) i procese njihova proučavanja. No, kako u hrvatskom slučaju, tj. značenju koje mu je pripisano u hrvatskom jeziku, on označuje tek medij kroz koji je potrebno proći da bi se stiglo do arheoloških nalaza, očigledna je neprimjerenost njegovoga korištenja. Zapitamo li se kroz kakav se medij stiže do arheoloških nalaza na kopnu zaključit ćemo kako je riječ o zemlji. Ipak, ne pada nikome na pamet da uobičajena arheološka istraživanja na kopnu nazove geoarheologijom.<sup>25</sup>

Obrazloženje o *hidroarheologiji* kao o međunarodno prihvaćenom terminu kojim se označava podvodna arheologija danas sasvim sigurno ne stoji. Uzimajući u obzir da je naziv *arheologija* stvoren spajanjem dviju grčkih riječi moglo bi se očekivati da i dodavanje treće (grč. ὑδωρ) ne će u međunarodnoj stručnoj javnosti izazvati otpor ukoliko se pokaže terminološki ispravnim. To se, međutim, nije dogodilo.

U posljednje vrijeme termin *hydroarchaeology* koristi se za proučavanje vodoopskrbnih sustava i upravljanja vodenim resursima u prošlosti, što se za sada čini najprimjerenijim rješenjem.<sup>26</sup> Predmetak *hidro-* opravdan je vodom samom<sup>27</sup> (ili organizmima koji pripadaju vodenom ambijentu<sup>28</sup>) kao centralnim objektom istraživanja, kao što je to slučaj i s drugim terminima skovanim na sličan način. Primjera radi, proučavanje kompleksnih vo-

toral thesis. In it, the term completely disappeared and was mentioned only once as an "expression that we all had – possibly unconsciously – used."<sup>23</sup> After Vrsalović's death, the terminology spiralled out of control, with the result that in both professional literature and the public press this clumsy expression continues to be used.<sup>24</sup>

The term *hydroarchaeology* might partly be justified as by Alison Gale, i.e. by the fact that the prefix *hydro-* denotes all human activities connected with water, their archaeological traces (which are often found on land) and their study processes. However, in Croatian, the inappropriateness of this word is clear, since in Croatian its meaning is associated only with the medium one needs to pass through in order to get to archaeological finds. A parallel argument would begin by asking through which medium archaeology is performed on land, concluding that the answer is the earth. Nevertheless, no one is tempted to call archaeological excavation on land geoarheology.<sup>25</sup>

Stating that *hydroarchaeology* is an internationally accepted term denoting underwater archaeology nowadays is certainly not true. Considering that the expression *archaeology* was coined from two Greek words, one might expect that adding a third word (Gr. ὑδωρ) would not be argued against on linguistic grounds if the new coinage were correct in terms of terminology. But this has not been the case.

In fact, lately the term *hydroarchaeology* has been used to denote water-supply systems and water-resource management in the past, which seems to be the most appropriate solution so far.<sup>26</sup> The prefix *hydro-* is justified by water itself<sup>27</sup> (or organisms belonging to a water setting<sup>28</sup>) being the central subject matter of research, mirroring other terms coined in a similar way. To illustrate this, the study of complex water-supply systems in the area of Kolan, Caska

23 D. VRSALOVIĆ, 1979, 32.

24 Usp. izlaganje I. Miholjeka na Međunarodnom znanstvenom skupu u Puli, 25.-27. studenoga 2009. pod naslovom *Hidroarheološka istraživanja priobalja poluotoka Vižula*.

25 I. RADIĆ ROSSI, 2005, 412. Geoarheologija primjenjuje metode i tehnike geografskih, geoloških i drugih prirodnih znanosti kako bi proučila prirodne procese o kojima ovisi formiranje i interpretacija arheoloških nalazišta. Termin *hidroarheologija* u značenju koje mu je do sada pridavano u hrvatskoj stručnoj literaturi ne može se obrazložiti na sličan način.

26 K. D. FRENCH, C. J. DUFFY, 2010.

27 Usp. npr. *hidrogeologija* (znanstvena disciplina koja se bavi distribucijom, kretanjem i svojstvima podzemnih voda).

28 Usp. npr. *hidrobiologija* (znanstvena disciplina koja proučava životne zajednice u vodi i vodu kao njihov životni prostor).

23 D. VRSALOVIĆ, 1979, 32.

24 See I. Miholjek's presentation at the International Scientific Symposium in Pula, 25-27 November 2009, entitled *Hydroarchaeological Explorations of the Vižula Peninsula Coastline*.

25 I. RADIĆ ROSSI, 2005, 412. Geoarchaeology applies the methods and techniques of geographical, geological and other natural sciences to the study of natural processes determining the formation and interpretation of archaeological sites. The term *hydroarchaeology* in the sense that has been associated with it in Croatian professional literature cannot be explained in a similar way.

26 K. D. FRENCH, C. J. DUFFY, 2010.

27 Compare e.g. *hydrogeology* (a scientific discipline that deals with the distribution, movement and properties of underground waters).

28 Compare e.g. *hydrobiology* (a scientific discipline that deals with living aquatic communities and water as their habitat).

doopskrbnih sustava na području Kolana, Caske i Novalje na otoku Pagu<sup>29</sup> moglo bi se opravdano nazvati hidroarheologijom, ali bi zbog postojećega stanja u arheološkoj terminologiji to u ovome trenutku izazvalo potpuno krivu predodžbu.

Značajne su se rasprave u arheološkim krugovima vodile i oko definiranja podvodne arheologije.<sup>30</sup> Raspravljalo se je li riječ o posebnoj grani arheologije, novoj znanstvenoj disciplini ili tek specifičnoj tehnici istraživanja. Rasprave su započele pedesetih godina prošlog stoljeća tekstovima Mladena Nikolancija i Mirka Šepera,<sup>31</sup> a potom se provlačile kroz tiskane radove i izlaganja na radnim sastancima i savjetovanjima. Po mišljenju Mladena Nikolancija "... naziv označuje dodir jedne izrazito humanističke nauke, arheologije, s modernim tehničkim dostignućima u svrhu upoznavanja novih područja za arheološku nauku, a da pri tom jedinstvo naučnih postulata ne dolazi u pitanje".<sup>32</sup> Za Dasena Vrsalovića podmorsku je arheologiju potrebno tretirati više kao tehnički izraz, a "s obzirom na sredinu u kojoj se vrše istraživanja uz upotrebu određene opreme u specifičnim okolnostima, nadasve pak u istraživanju arheološke građe koja je isključivo vezana za podmorje, slobodni smo je tretirati arheološkom disciplinom, ali ni u kakvom slučaju posebnom granom arheologije".<sup>33</sup>

Zanimljivo je, međutim, razmišljanje koje je u izlaganju naslovljenom *Problemi naše hidroarheologije*, održanom 1973. godine na radnom sastanku u Dubrovniku, iznijela Ksenija Radulić. Ona je ponovila stav kako se, imajući u vidu cjelinu povijesnih zbivanja, podvodna arheologija izdvaja tek kao tehnika, ali je upozorila kako ona "dolazi do podataka koji se samo u tome mediju mogu naći, jer je on autentično mjesto određenog životnog zbivanja". Sidra, brodovi i svi ostali nalazi vezani uz plovidbu, pomorsku i riječnu trgovinu i ribarstvo pronalaze se većinom u tekućem prirodnom mediju koji je, prema riječima Ksenije Radulić, "u stanovitom smislu stalna povijesna antiteza čvrstom mediju, kopnu".<sup>34</sup> Tako shvaćen

and Novalja on the island of Pag<sup>29</sup> could with good reason be called *hydroarchaeology*. However, due to the existing state of affairs in archaeological nomenclature, use of this term today would merely add confusion to an already complex situation.

Significant discussions among archaeologists also took place regarding the definition of underwater archaeology.<sup>30</sup> These concerned whether underwater archaeology is a separate branch of archaeology, a new scientific discipline or only a specific research technique. The discussions began in the 1950s in papers by Mladen Nikolanci and Mirko Šeper,<sup>31</sup> and continued in printed articles and presentations from working meetings and symposia. In Mladen Nikolanci's opinion, "the term denotes a point of contact between a typical humanities discipline (archaeology) and modern technical achievements, with the aim of getting to know new areas of interest to archaeological science, without bringing into question the unity of scientific postulates."<sup>32</sup> According to Dasen Vrsalović, submarine archaeology should rather be regarded as a technical term, and "given the setting in which excavations are conducted with the use of certain equipment under specific conditions, and particularly in view of the researched archaeological material, which is exclusively connected with the submarine context, we are free to regard it as an archaeological discipline, but by no means as a separate branch of archaeology."<sup>33</sup>

However, an interesting opinion was expressed by Ksenija Radulić in a presentation bearing the title *Problems of our Hydroarchaeology*, given in 1973 at a working meeting in Dubrovnik. She reiterated the opinion that, keeping in mind historical events in their entirety, underwater archaeology stands out merely as a technique, but she pointed out that it "uncovers information that can be found only in this particular medium; it being an authentic location of defined events."<sup>34</sup> Anchors, ships and all other finds related to seafaring, maritime and river trade and fishing are found mostly in a natural liquid medium which, according to Radulić, "in a certain way represents

29 A. ŠKUNCA, 2000; B. ILAKOVAC, 2008; I. RADIĆ ROSSI, J. ZMAIĆ, 2009.

30 D. VRSALOVIĆ, 1974, 13; D. VRSALOVIĆ, 1976, 351; D. VRSALOVIĆ, 1979, 28-30.

31 M. NIKOLANCI, 1953, 171; M. ŠEPER, 1958, 330; M. NIKOLANCI, 1959.

32 M. NIKOLANCI, 1959, 711.

33 D. VRSALOVIĆ, 1979, 60, bilj. 58.

34 K. RADULIĆ, 1973, 55.

29 A. ŠKUNCA, 2000; B. ILAKOVAC, 2008; I. RADIĆ ROSSI, J. ZMAIĆ, 2009.

30 D. VRSALOVIĆ, 1974, 13; D. VRSALOVIĆ, 1976, 351; D. VRSALOVIĆ, 1979, 28-30.

31 M. NIKOLANCI, 1953, 171; M. ŠEPER, 1958, 330; M. NIKOLANCI, 1959.

32 M. NIKOLANCI, 1959, 711.

33 D. VRSALOVIĆ, 1979, 60, note 58.

34 K. RADULIĆ, 1973, 55.

pojam ne bi se mogao odnositi tek na zasebnu tehniku, već bi podvodnu arheologiju trebalo tretirati kao znanstvenu disciplinu koja proučava segment ljudske prošlosti nužno povezan s vodom. Ona se u tom slučaju nalazi na razini numizmatike, epigrafije, provincijalne ili ranokršćanske arheologije, koje materijalno, prostorno ili kronološki omeđuju područje svojega interesa. Ksenija Radulić istakla je kako su dotadašnji rezultati na području podvodne arheologije pokazali kako taj pojam "uključuje i specifičnu tehniku rada u mediju vode i specifično područje istraživanja materijalne kulture prošlosti".<sup>35</sup> Po njenom se mišljenju mnogo uložilo u rješavanje tehničkih problema, pa je došlo vrijeme da se više pozornosti posveti znanstvenoj vrijednosti istraživačkih akcija. Iako se sama nije bavila ronjenjem, Ksenija Radulić pravodobno je osjetila opasnost koja je prijetila zbog neusklađenog razvoja znanosti i tehnike, a koja je osamdesetih godina izazvala u svijetu krizu identiteta podvodne arheologije.<sup>36</sup>

Izgleda da je upravo takvo stanje bilo izvan granica naše zemlje poticaj za sve učestalije korištenje naziva *maritime archaeology* i *nautical archaeology*, kojima se naglašava kako je riječ o proučavanju pomorstva u najširem, te plovidbe i brodarstva u užem smislu, neovisno o tehnici istraživanja koja se primjenjuje za prikupljanje arheoloških podataka.<sup>37</sup> Iako u oba slučaja gotovo automatski pomišljamo na podvodna tj. podmorska nalazišta, to nipošto nije tako jer se mnogi značajni tragovi pomorstva pronalaze na nalazištima na kopnu. Stoga je u najširem smislu ipak prevladao termin *maritime* (pomorski) nakon što su ga argumentirano primijenili uvaženi svjetski stručnjaci.<sup>38</sup> U svojim radovima oni su se doduše oslanjali poglavito na podmorske nalaze, no vrijeme je pokazalo kako je riječ o terminu čija širina pokriva čitavo područje znanstvenog interesa dijela arheologije koji proučava pomorstvo prošlih vremena.

Prema riječima G. F. Bassa, *maritime archaeology* i *nautical archaeology* postale su sedamdesetih godina prošloga stoljeća i akademske discipline, što se odrazilo u osnivanju institucija *The Leon Reca-*

a permanent historical antithesis to firm media: the land." Thus explained, the term relates to more than technique, so consequently underwater archaeology should be treated as a unique scientific discipline studying the segment of human history connected with water. In this vein, it is similar to numismatics, epigraphy, or early Christian archaeology, which define their areas of interest in terms of a segment of material culture, territory or chronology. Ksenija Radulić pointed out that the results achieved in the field of underwater archaeology up to that point had shown that the term "also includes a specific working technique in the medium of water and a specific field of study of the material culture of the past."<sup>35</sup> In her opinion, much had been invested in solving technical problems, and the time had come to devote more attention to the scientific value of excavation campaigns. Although she was not herself a diver, Radulić anticipated the potential danger caused by the accelerating pace of advancement in technological capabilities exceeding the controlled development of science, which in the 1980s was to cause a global crisis in the identity of underwater archaeology.<sup>36</sup>

It seems that precisely such a situation beyond the borders of our own country served as an incentive for increasingly frequent use of the phrases *maritime archaeology* and *nautical archaeology*, which emphasise the study of maritime activities in the broadest sense of the word, and of navigation and shipping in a more narrow sense, regardless of the exploration technique used for collecting the archaeological data.<sup>37</sup> Although most commonly both words deal with underwater, i.e. submarine, sites, this is not necessarily the case, because many significant traces of maritime history are found at sites on land. Therefore, the term *maritime* prevailed in the widest sense after being used in a reasoned manner by prominent international experts.<sup>38</sup> It is true that in their works they relied primarily on submarine finds, but the term *maritime archaeology* over time has evolved to cover the entire sphere of scientific interest in that part of archaeology dealing with all the maritime aspects of past societies.

According to G. F. Bass, in the nineteen-seventies, *maritime archaeology* and *nautical archaeology*

35 *Ibid.*, 56.

36 D. J. LENIHAN, 1983, 39; E. G. STICKEL, 1983, 220, 243.

37 Vrijedi spomenuti kako je Radmila Matejčić u nekim svojim tekstovima koristila naziv "nautolog" i time na neki način najavila ono što se u engleskom naziva *nautical archaeology*. R. MATEJČIĆ, 1973.

38 K. MUCKLEROY, 1978; S. McGRAIL, 1984 i dr.

35 *Ibid.*, 56.

36 D. J. LENIHAN, 1983, 39; E. G. STICKEL, 1983, 220, 243.

37 It is worth mentioning that Radmila Matejčić in some of her works used the term *nautologist*, thus in a way anticipating what in English is called *nautical archaeology*, R. MATEJČIĆ, 1973.

38 K. MUCKLEROY, 1978; S. McGRAIL, 1984 et al.

*nati Institute for Maritime Studies (University of Haifa) i St. Andrews Institute of Maritime Archaeology*, te pokretanjem akademskih programa kao što su *Nautical Archaeology Program (Texas A&M University)*, *Maritime Studies Program (East Carolina University)* i sl.<sup>39</sup>

Sean McGrail držao je arheologiju pomorstva prije svega dijelom arheološke znanosti koja proučava brodove, brodogradnju, brodsku opremu, njihovu svrhu i način korištenja, no kao bliske teme naveo je i proučavanje luka, skladišta, brodogradilišta, spremišta, izvlačilišta i sl. On tumači kako se sva navedena evidencija može pronaći u moru, na kopnu ili u zoni plime i oseke. Brodovi se u kopnenom kontekstu mogu naći iz razloga kao što su izdizanje kopna, zamuljenje luka, promjena riječnih tokova, pogrebni običaji i dr., dok se zbog tektonskih poremećaja ili kontinuiranog poniranja obale kopnene građevine mogu naći pod morem.<sup>40</sup> U kasnijim radovima McGrail je unutar arheologije pomorstva izdvojio arheologiju broda (*archaeology of boats and ships*) kao njen najvažniji dio, a arheologiju pomorstva definirao kao proučavanje ljudskog kontakta s rijekama i morima.<sup>41</sup> Iako je, prema njegovim riječima, čovjek prije zaplovio morem nego li je počeo obrađivati zemlju ili izrađivati kola, arheologija pomorstva profilirala se gotovo stotinu godina nakon što je arheologija zadobila svoj današnji status.

Osamdesetih godina prošloga stoljeća termini poput *underwater*, *maritime* i *marine* tretirani su na ravnopravan način.<sup>42</sup> Termin *underwater archaeology* zadržao se, čini se, prije svega jer je obuhvaćao sva istraživanja kako u moru tako i u slatkovodnim ambijentima. Ne obraćajući mnogo pozornosti na sam naziv znanstvene discipline, stručnjaci su se u to vrijeme bavili prije svega njezinim smislom zbog već spomenute krize identiteta izazvane napretkom tehnike nedovoljno popraćenog razvojem teorije. Takva situacija dovela je do mnogih prigovora i nepriznavanja znanstvenih potencijala i postignuća podmorskih arheoloških istraživanja.<sup>43</sup>

Donedavno u hrvatskoj znanosti nije postojao pokušaj prevođenja ili pojašnjavanja termina *maritime* i *nautical archaeology* iako su njima okršteni mnogi instituti, sveučilišni odjeli, katedre, posli-

became academic disciplines, which was reflected in the establishment of The Leon Recanati Institute for Maritime Studies (University of Haifa) and St. Andrew's Institute of Maritime Archaeology, as well as the initiation of academic programmes such as the Nautical Archaeology Program (Texas A&M University), Maritime Studies Program (East Carolina University), and the like.<sup>39</sup>

Sean McGrail defined *maritime archaeology* in the first place as that part of archaeology dealing with ships, shipbuilding, and ship equipment, including functions and use, but he also mentioned the study of ports and harbours, warehouses, shipyards, arsenals, ramps, etc. as related subject matter. He explained that evidence of the above can be found in the sea, on land or in tidal zones. In the context of the land, ships can be found due to the elevation of the shore, the silting up of ports and harbours, changes in river courses, funeral rites, etc., similar to finding land structures under water due to tectonic disturbances or subsidence of the coast.<sup>40</sup> In his later papers, McGrail separated the *archaeology of boats and ships* from maritime archaeology as its most important part, while defining *maritime archaeology* as the study of human contact with rivers and seas.<sup>41</sup> Although, as he put it, man started sailing before he started to cultivate land or make wagons, he noted the development of maritime archaeology lagged the development of present-day archaeology by over 100 years.

In the 1980s, terms such as *underwater*, *maritime* and *marine* were treated as synonymous.<sup>42</sup> It seems that the term *underwater archaeology* was preserved mainly because it encompassed all forms of exploration: both in the sea and in freshwater settings. Without paying much attention to the name of the discipline, at that time experts were primarily concerned with its subject matter due to the already-mentioned crisis of identity caused by the progress of technology, which had not been accompanied by a corresponding development in theory. This situation generated a lack of recognition of scientific potential, resulting in the failure to appreciate the achievements of submarine archaeological exploration.<sup>43</sup>

Until recently, in Croatia there had been no attempts at translating or clarifying the terms *maritime* and *nautical archaeology*, although many insti-

39 G. F. BASS, 2011, 7-8.

40 S. McGRAIL, 2006 (1983).

41 S. McGRAIL, 2001, 437-439.

42 D. J. LENIHAN, 1983, 50.

43 E. G. STICKEL, 1983, 219, 243.

39 G. F. BASS, 2011, 7-8.

40 S. McGRAIL, 2006 (1983).

41 S. McGRAIL, 2001, 437-439.

42 D. J. LENIHAN, 1983, 50.

43 E. G. STICKEL, 1983, 219, 243.

jediplomski programi i stručne publikacije.<sup>44</sup> U suradnji s lingvistima Sveučilišta u Zadru<sup>45</sup> kao najprikladniji prijevod termina *maritime archaeology* odabran je termin *arheologija pomorstva* (alternativno: *pomorska arheologija*), koji dovoljno jasno upućuje na specifično područje ljudskog djelovanja koje predstavlja predmet proučavanja te arheološke discipline. Pri tome se pomorstvo shvaća u svojem najširem smislu u kojemu predstavlja sveukupnost svih djelatnosti, vještina i društvenih odnosa na moru ili u vezi s morem, obuhvaćajući pomorsko gospodarstvo i razne neprivredne djelatnosti.<sup>46</sup> Prema riječima stručnjaka, ostali jezici ne raspolažu tako sveobuhvatnim terminom.<sup>47</sup>

Iako prijevod pomoću genitiva ne odgovara u potpunosti duhu hrvatskoga jezika, u nekim je slučajevima njegovo korištenje gotovo neizbježno. Pokušaj da se *arheologiju pomorstva* nazove *pomorskom arheologijom* nailazi na poteškoće zbog prevelike sličnosti izraza *pomorska* i *podmorska*, koja znatno smanjuje mogućnost percipiranja razlike sadržane u dvama nazivima.

U domenu arheologije pomorstva ili pomorske arheologije ulazi velika većina podmorskih nalaza, ali se ona u punom smislu ostvaruje tek prožimanjem s rezultatima istraživanja na kopnu. Zemljopisna granica do koje se prema zaleđu osjeća utjecaj mora na gospodarstvo, materijalnu i duhovnu kulturu lokalnog stanovništva, do koje stoga seže i arheologija pomorstva, ovisna je prije svega o geomorfološkim osobinama krajolika ali i o političkim prilikama tijekom povijesnih razdoblja. Slijedeći riječne tokove i planinske prijevoje, tragove pomorstva pratimo i duboko u unutrašnjost kopna

tutes, university departments, chairs, postgraduate programmes and professional publications bear the terms in their names.<sup>44</sup> In co-operation with linguists from the University of Zadar,<sup>45</sup> the term *maritime archaeology* was translated into Croatian as *arheologija pomorstva* (alternatively: *pomorska arheologija*), as it clearly denotes a specific area of human activity which is the subject matter of the study of this archaeological discipline. At the same time, the term *pomorstvo* is viewed in the widest sense of the word, representing the entirety of activities, skills and social relations at sea or connected with the sea, encompassing maritime economic and various non-economic activities.<sup>46</sup> According to experts, other languages do not have such an all-encompassing expression.<sup>47</sup>

Although the translation into Croatian which includes the genitive case (corresponding to something like "of maritime activities") does not entirely correspond with the spirit of the Croatian language, in some cases its usage is almost unavoidable. The attempt to use the expression *pomorska arheologija* instead of *arheologija pomorstva* is rather problematic as the terms *pomorska* (for *maritime*) and *podmorska* (for *submarine*) are very similar, which significantly reduces the possibility of perceiving the differences in the meaning of the two terms.

A vast majority of submarine finds belong to the domain of maritime archaeology, but full spectrum analysis of maritime archaeology issues requires the combination of submarine find analysis with the results of research conducted on land. The geographic limits of the influence of the sea on the economy and on cultural aspects of the local population depend not only on the geomorphologic characteristics of

44 Usp. npr. *Institute of Nautical Archaeology i Nautical Archaeology Program* (Texas A&M University, USA), *Centre for Maritime Archaeology and Underwater Cultural Heritage* (University of Alexandria, Egypt), *Maritime Archaeology Programme* (University of Southern Denmark), *Centre for Maritime Archaeology* (University of Southampton, UK), *Program in Maritime Archaeology* (Flinders University, Australia), *The International Journal of Nautical Archaeology*, *Archaeologia Marittima Mediterranea* i dr.

45 U definiranju i odabiru najprikladnijih naziva sudjelovali su prof. dr. sc. Vladimir Skračić i doc. dr. sc. Nikola Vuletić, na čemu im ovom prilikom zahvaljujem. Prikladnost termina *arheologija pomorstva* potvrđena je i anketom koju je kolega Vuletić proveo među odabranom skupinom hrvatskih lingvista.

46 A. I. SIMOVIĆ, 1990: *pomorstvo*. Pomorsko gospodarstvo uključuje brodarstvo, eksploataciju luka, brodogradnju, ribarstvo i ribarsku industriju, iskorištavanje organskih i neorganskih tvari u moru i podmorju i dr., a neprivredne djelatnosti odnose se na pomorsku upravu, sigurnost plovidbe, pomorsko školstvo, i sve djelatnosti znanstvenih institucija koje se bave unapređivanjem pomorskih djelatnosti.

47 V. BRAJKOVIĆ, 1983.

44 Compare e.g. the *Institute of Nautical Archaeology and Nautical Archaeology Program* (Texas A&M University, USA), *Centre for Maritime Archaeology and Underwater Cultural Heritage* (University of Alexandria, Egypt), *Maritime Archaeology Programme* (University of Southern Denmark), *Centre for Maritime Archaeology* (University of Southampton, UK), *Program in Maritime Archaeology* (Flinders University, Australia), *The International Journal of Nautical Archaeology*, *Archaeologia Marittima Mediterranea* and others.

45 My thanks go to Professors Vladimir Skračić and Docent Nikola Vuletić for participating in defining and selecting the most appropriate terminology. The appropriateness of the term *arheologija pomorstva* was also confirmed in an opinion poll conducted by Vuletić among selected Croatian linguists.

46 A. I. SIMOVIĆ, 1990: *pomorstvo*. The maritime economy includes shipping, exploitation of ports and harbours, shipbuilding, fisheries and the fish industry, exploitation of organic and inorganic substances in and under the sea etc., while non-economic activities are related to maritime administration, navigation safety, maritime education and all activities of scientific institutions dealing with the improvement of maritime activities.

47 V. BRAJKOVIĆ, 1983.

u potrazi za izvorima ili odredištima materijalnih i duhovnih dobara koja su na mnoge načine tijekom povijesti oblikovala život primorskih žitelja.

Pogodan je primjer proučavanje antičkoga gospodarstva kojega važan sastavni dio čini proizvodnja i korištenje amfora. Ograniči li se istraživanja isključivo na podmorske nalaze, znatno će se ograničiti i spoznajne mogućnosti. Velika količina cjelovitih predmeta, od kojih mnogi potječu iz dobro datiranih zatvorenih cjelina brodoloma, pomoći će u tipološkim klasifikacijama te u proučavanju mehanizama pomorskoga transporta i trgovine određenim namirnicama. No život amfora započinje mnogo ranije u radionicama na kopnu; na kopnu se proizvodi i puni njihov sadržaj; one kopnom stižu do izvoznih luka; njima se trguje na velikim tržnicama Staroga svijeta, a cestama i vodenim tokovima putuju do udaljenih potrošača. Iako su amfore na Mediteranu postale nekom vrstom zaštitnoga znaka podmorske arheologije, te donekle i simbolom istraživanja i zaštite podmorske kulturne baštine, podatci prikupljeni na nalazištima na kopnu i njihova usporedba s onima iz podmorja sastavni su dio svakog ozbiljnijeg znanstvenog istraživanja.

Na primjeru amfora jasno se uočava razlika između podmorske arheologije i arheologije pomorstva. Podmorska će arheologija korektno obaviti tehnički dio posla i slijedeći uobičajenu metodologiju arheoloških istraživanja iz mora iznijeti sve nalaze i informacije o njima. Njezina će se interpretacija ograničiti na kontekst podmorskog nalazišta i odgovarajućih podmorskih analogija, no u trenutku kad posegne za informacijama o podrijetlu i destinaciji broskog tereta, o uzrocima i posljedicama njegovoga transporta tj. tehnološkom sustavu kojemu on pripada, njeno će istraživanje izaći iz podmorskih okvira i nužno se pretvoriti u arheologiju pomorstva. Kako se to gotovo u pravilu događa prilikom interpretacije svakog podmorskog nalazišta, ne čudi sklonost znanstvenih institucija prema terminu *maritime* u odnosu na *underwater*.

Tome u prilog idu i riječi već citiranog "oca podvodne arheologije" Georga Bassa o njegovu iskustvu s najstarijim istraženim brodolomom na svijetu: "Nisam nikada tvrdio da je jedan brod posebno značajan u našem sveopćem razumijevanju kasnobrončanodobne pomorske trgovine. No, obrada predmeta s nalazišta uputila me na ponovno proučavanje slikarstva egipatskih grobnica, ciparskih i minojskih pečata, mikenske umjetnosti i

the landscape, but also on political circumstances in the course of historical periods. Following river courses and mountain passes inland allows the tracing of maritime influences away from oceans, which are reflected in the sources and destinations of both material goods and spiritual practices, which in many ways throughout history directly impact the lives of coastal populations.

A good example is the study of the economy of Classical Antiquity, an important part of which is reflected in the production and usage of amphorae. Amphorae studies limited exclusively to submarine finds would significantly impact the ability to gain new knowledge. A large number of wholly preserved objects, many of which originate from accurately dated shipwrecks, contribute to the typological classification and study of the mechanisms of maritime transport and the trade in certain goods. Nevertheless, the life of amphorae began much earlier in workshops on land; their content was produced and filled on land; they were transported to ports and harbours for export by land; and ultimately they were traded in the large markets of the Old World, and conveyed by roads and waterways to distant consumers. Although in the Mediterranean, amphorae have become a sort of trademark of submarine archaeology, and partly also a symbol of the exploration and protection of submarine cultural heritage, the data collected from sites on land and their comparison with those from under the sea form a significant constituent part of any serious scientific research.

The example of amphorae clearly shows the difference between submarine archaeology and maritime archaeology. Submarine archaeology utilizes technical means to retrieve the finds and relevant information from the sea, while applying the appropriate archaeological research methodology. Its interpretation will be limited to the context of a submarine site and corresponding submarine analogies. The moment analysis begins regarding information on the origin and destination of a ship's cargo, on the reasons for and consequences of its transport, and its technological composition, the research has passed beyond the submarine framework, and necessarily turns into maritime archaeology. As this is almost the rule when interpreting any submarine site, it is no wonder that scientific institutions prefer the term *maritime* to *underwater*.

This is also supported by the words of the already quoted "father of underwater archaeology" George Bass concerning his experience with the oldest explored shipwreck in the world: "Nowhere have

glinenih pločica, kao i na za mene potpuno novo proučavanje ciparskih brončanih proizvoda te njihovih prototipova. Sve me to dovelo do općenitih zaključaka o trgovini u kasnom brončanom dobu".<sup>48</sup> Ono što su Bass, a potom i njegov nasljednik na mjestu voditelja istraživanja Cemal Pulak vrhunski tehnički odradili na morskome dnu pretvorilo se tijekom narednih godina u složeno interdisciplinarno znanstveno istraživanje koje je daleko nadmašilo uske okvire podvodne arheologije.<sup>49</sup> Već je i ranije Bassovo istraživanje brončanodobnog brodoloma Cape Gelidonya pribavilo autoru mnoge pohvale za nevjerojatnu količinu prikupljenih podataka i zavidnu razinu interdisciplinarnosti primijenjenu pri njihovoj obradi.<sup>50</sup> Jasno je da su Bassovi rezultati daleko premašili predodžbu sadržanu u terminu *podvodna arheologija*.

Izravna potreba za prožimanjem rezultata istraživanja na kopnu i u moru još je očiglednija u slučaju arheoloških nalazišta na maloj dubini. Priobalni gospodarski kompleksi iz antičkog i srednjovjekovnog doba promjenom morske razine dijelom su se pretvorili u podmorska nalazišta. Slično se dogodilo s lukama i lučkim uređajima, a i samostalni gospodarski objekti (ribnjaci, solane) izgrađeni u plitkome moru većinom se uklapaju u širi naseobinski kontekst kojega tragove pronalazimo na obližnjoj obali. Osim toga, svaka je značajnija luka prostor gdje se susreću more i zaleđe, a mnoga su priobalna gospodarska imanja mjesta na kojima se koriste pogodnosti polja, pašnjaka i mora. U takvim su slučajevima gotovo u pravilu podatci raspoređeni na obje strane, od kojih svaka na svoj način doprinosi cjelini povijesne slike.

Dio podvodnih istraživanja vezan je uz unutrašnje vode do kojih ne dopire utjecaj mora. Neopreznom bi se promatraču moglo učiniti da ona opravdavaju korištenje termina podvodna arheologija za arheološku disciplinu koja se njima bavi. Ipak, i u tome slučaju vrijede gotovo jednake pretpostavke koje su navedene u slučaju pomorstva. O fenomenu ljudskoga života na rijekama, jezerima i ostalim slatkovodnim površinama ne možemo suditi samo na osnovi podvodnih nalaza, iako ih u znanstvenom istraživanju možemo itekako kvalitetno iskoristiti. Stoga su sve popularniji nazivi *freshwater archaeology* (*arheologija slatkih*

I ever claimed that one ship was particularly meaningful in our overall understanding of Late Bronze Age maritime commerce. My study of artifacts from the site, however, led me to reexamine Egyptian tomb paintings, Cypriot and Minoan seals, and Mycenaean art and tablets, as well as to make a fresh study of Cypriot bronze artifacts and their prototypes. Those studies led to more general conclusions about trade in the Late Bronze Age."<sup>48</sup> The knowledge that Bass, and Cemal Pulak, his successor in directing subsequent campaigns, gained through employing the highest technical standards on the seabed over the ensuing years ultimately culminated in complex interdisciplinary scientific research which far surpassed the narrow framework of underwater archaeology.<sup>49</sup> Bass's exploration of the Bronze Age shipwreck off Cape Gelidonya has garnered high praise for the incredible amount of data collected and the enviable level of interdisciplinary methods applied in their processing.<sup>50</sup> It is clear that Bass's results by far surpass the concept contained in the term *underwater archaeology*.

The direct need to combine the results from land and sea explorations is even more evident for shallow water archaeological sites. As a result of changes in sea level and subsidence, some economic complexes along the coast have become submarine sites, including ports and harbours and their associated installations. In other instances, individual economic structures built in shallow seawater (ex. fish ponds, salt works) are worthy of research for their wider settlement contexts, the traces of which can often be found on the nearby coast. Additionally, every larger port is a space where the sea and the hinterland meet, and many coastal economic areas are places which utilize the combined advantages of fields, pastures and sea. In such cases, almost as a rule, information is distributed in both land and water, with information from both media contributing to the historical picture as a whole.

A part of underwater exploration is connected with inland waters which are not affected by the sea. An inattentive observer might think that these justify the use of the term underwater archaeology for the archaeological discipline that deals with them. However, even in this case, the same assumptions are valid as in the case of maritime activities. We cannot judge

48 G. F. BASS, 1991, 73.

49 Sintez rezultata istraživanja i obrade nalaza objavljena je u C. PULAK, 1998; C. PULAK, 2009.

50 G. F. BASS, 1967; P. J. WATSON, 1983, 25.

48 G. F. BASS, 1991, 73.

49 A synthesis of the exploration results and processing of finds was published in C. PULAK, 1998; C. PULAK, 2009.

50 G. F. BASS, 1967; P. J. WATSON, 1983, 25.

voda) ili *archeology of inland waters* (*arheologija unutrašnjih voda*) daleko primjereniji za imenovanje znanstvene discipline nego li naziv koji ih ograničava isključivo na rad pod vodom.

Osim arheologije pomorstva i arheologije unutrašnjih voda, zbog svoje se višestruke osjebnosti u svjetskoj znanosti posebno izdvojila i *arheologija broda*.<sup>51</sup> Engleski naziv *nautical archaeology*, francuski *archéologie navale*, talijanski *archeologia navale* ili španjolski *arqueologia náutica*, teško je prevesti pridjevom. Jedini koji stoji na raspolaganju – ukoliko pomorstvo, a time i pridjev *pomorski* shvatimo u svoj njegovoj širini – jest pridjev *nautički* čije suvremeno značenje u hrvatskom jeziku uglavnom ne obuhvaća ono čime se bavi arheologija o kojoj je riječ. Kad bi se pojam pomorstva koristio u njegovom užem značenju umijeća ili vještine upravljanja i manevriranja brodom i brodskom opremom,<sup>52</sup> u njemu bi nedostajalo sve ono što se odnosi na osnivanje, izradu i funkcije samoga broda. Termin *plovidba* obuhvaća kretanje svih vrsta brodova neovisno o njihovoj namjeni, a ukoliko je riječ o komercijalnom korištenju broda za prijevoz ljudi i robe ili iskorištavanje morskih bogatstava, koristi se termin *brodarenje*.<sup>53</sup> Stoga se za sada *arheologija broda* čini najprimjerenijim nazivom znanstvene discipline koja je u Hrvatskoj zamrla još prije nego li se počela razvijati.

Iako se arheologija broda u Hrvatskoj ozbiljnije profilira tek u novije vrijeme,<sup>54</sup> njezine začetke nalazimo u projektima koje je na području Nina i Zatona ostvario Zdenko Brusić. Godine 1966. kod rta Kremenjače u zaljevu Zatonu Brusić je otkrio ostatke broda iz antičkog vremena, izrađenog tehnikom šivanja.<sup>55</sup> Na položaju zvanom Usta na ulazu u ninsku luku, u vremenu od 1966. do 1968., uočio je i ostatke dviju namjerno potopljenih brodica iz srednjovjekovnog doba.<sup>56</sup> Tijekom 1974. godine ninske su brodice izvađene, a Božidar Vilhar je sa suradnicima proveo složene postupke konzerviranja drvene građe i rekonstrukcije nalaza u tadašnjoj Arheološkoj zbirici u

the phenomenon of human activity on rivers, lakes and other freshwater areas solely on the basis of underwater finds, although they can be really useful in scientific research. Therefore the terms *freshwater archaeology* or *archaeology of inland waters* are much more appropriate to denote scientific disciplines than a name which limits them exclusively to work underwater.

In addition to maritime archaeology and the archaeology of inland waters, in world science *nautical archaeology*<sup>51</sup> also has a distinctive quality that makes it stand out. The English term *nautical archaeology*, French *archéologie navale*, Italian *archeologia navale* or Spanish *arqueologia náutica* are all difficult to translate into Croatian using an adjective. Understanding *pomorstvo* (Croatian for all the human activities on the sea or related to the sea) and its adjective *pomorski* (Croatian for *maritime*) in its broadest sense, the only available adjective is *nautički* (*nautical*). Unfortunately the contemporary Croatian meaning of *nautički* does not generally encompass the aspects of nautical archaeology as understood in the discipline. Use of the term *pomorstvo* in its narrow sense, meaning the art or skill of steering and manoeuvring a ship and its equipment,<sup>52</sup> neglects the portion of nautical archaeology meaning that has to do with the design, construction and function of the ship. The term *plovidba* (Croatian for *navigation*) denotes the movement of all sorts of boats and ships, regardless of their function. If the ship is used for commercial purposes to convey passengers and goods or to exploit marine resources, the term *brodarenje* (*seafaring*) is used.<sup>53</sup> Therefore, considering the options, *arheologija broda* (*archaeology of the ship*) seems to be the most suitable translation for the term nautical archaeology.

Although it is only recently that nautical archaeology has given itself a clearer image in Croatia,<sup>54</sup> its beginnings can be traced in projects carried out in the Nin and Zaton areas by Zdenko Brusić. In 1966, near Cape Kremenjače in Zaton Bay, Brusić discovered the remains of a ship from the period of Classical Antiquity, manufactured using the sewing technique.<sup>55</sup> At the Usta site at the entrance to Nin harbour he also spotted the remains of two intentionally sunken mediaeval boats.<sup>56</sup>

51 I u ovom slučaju, iznalaženju odgovarajućeg naziva primjerenog sadržaju discipline znatno su doprinijeli stručnjaci Sveučilišta u Zadru, prof. dr. sc. Vladimir Skračić i doc. dr. sc. Nikola Vuletić.

52 V. BRAJKOVIĆ, 1983; A. I. SIMOVIĆ, 1990, 617.

53 V. BRAJKOVIĆ, 1983, 23.

54 G. BOETTO, S. MARLIER, I. RADIĆ ROSSI, 2008; I. RADIĆ ROSSI, G. BOETTO, 2010; I. RADIĆ ROSSI, G. BOETTO, 2011.

55 Z. BRUSIĆ, 1968.

56 Z. BRUSIĆ, 1969; Z. BRUSIĆ, 1969a; Z. BRUSIĆ, 1978.

51 In this case too, University of Zadar experts, Professor Vladimir Skračić and Docent Nikola Vuletić, have contributed significantly to finding an appropriate name for the discipline denoted by the content.

52 V. BRAJKOVIĆ, 1983; A. I. SIMOVIĆ, 1990, 617.

53 V. BRAJKOVIĆ, 1983, 23.

54 G. BOETTO, S. MARLIER, I. RADIĆ ROSSI, 2008; I. RADIĆ ROSSI, G. BOETTO, 2010; I. RADIĆ ROSSI, G. BOETTO, 2011.

55 Z. BRUSIĆ, 1968.

56 Z. BRUSIĆ, 1969; Z. BRUSIĆ, 1969a; Z. BRUSIĆ, 1978.



Ninu.<sup>57</sup> Upravo tih godina Honor Frost realizirala je projekt iskopavanja i vađenja dvaju punskih brodova pronađenih u Marsali na Siciliji,<sup>58</sup> što ukazuje na suvremenost Brusićevih projekata u odnosu na ostala slična zbivanja u Mediteranu.

Godine 1979. izvađeni su iz mora i ostatci prvoga šivanog broda iz Zatonu. Drugi je šivani brod otkriven 1982. godine, a izvađen pet godina kasnije.<sup>59</sup> Nažalost, zatonski brodovi nisu doživjeli svijetlu sudbinu ninskih nalaza. Po njihovom vađenju i preliminarnoj objavi na duže se vrijeme zaustavilo zanimanje za proučavanje brodskih konstrukcija. Koliko god to nevjerojatno zvučalo s obzirom na izrazito dugu tradiciju organiziranih podmorskih istraživanja, u hrvatskom podmorju do danas nije sustavno istražen niti jedan potonuli brod koji leži na dubini većoj od nekoliko metara. Sva dosadašnja istraživanja svela su se na vađenje ostataka brodske opreme i tereta, dok je drvena građa u pravilu tek površno dokumentirana i (najčešće nedovoljno zaštićena) ostavljena na morskome dnu.<sup>60</sup>

Termin *archéologie navale* u stručnu je literaturu polovicom devetnaestoga stoljeća uveo Auguste Jal<sup>61</sup> i njime službeno okrstio područje istraživanja koje je u Francuskoj započelo sintezom znanja o grčkom i rimskom brodogradnji već tri stoljeća ranije.<sup>62</sup> Naglim uzletom podmorskih i podvodnih istraživanja tijekom šezdesetih i sedamdesetih godina prošloga stoljeća u kratko je vrijeme izrazito porasla količina raspoloživih podataka, a brodolomi postali najvažnijim izvorom informacija. U to se vrijeme pojavio i već spomenuti termin *shipwreck archeology* (arheologija brodoloma) koji nije široko prihvaćen, iako se i danas povremeno koristi.<sup>63</sup> Zahvaljujući širenju zanimanja za fenomen brodoloma, većim dijelom uzrokovanom marljivim znanstvenim radom male skupine entuzijasta predvođene Bassom, pojavio se i izraz *shipwreck anthropology* (antropologija bro-

In 1974, the Nin boats were raised, and Božidar Vilhar led the complex process of conserving the wooden material and reconstructing finds in the Archaeological Collection of Nin.<sup>57</sup> At exactly the same time, Honor Frost was carrying out the excavation and extraction of two Punic ships found in Marsala on Sicily,<sup>58</sup> which illustrates how up-to-date Brusić's projects were in the context of other similar events in the Mediterranean.

In 1979, the remains of the first sewn ship from Zaton were removed from the sea. A second sewn ship was discovered in 1982 and raised five years later.<sup>59</sup> Unfortunately, the Zaton ships did not experience the fortune of the Nin finds. Upon their excavation and the preliminary publication of the findings, long-term interest in the study of ship construction ceased. No matter how incredible it might sound in view of the extraordinarily long tradition of organised submarine excavations, no sunken ships at a depth of more than several metres in Croatian waters have so far been systematically explored. All explorations to date have consisted of salvaging the remains of ship equipment and cargo, while the wooden material was as a rule documented only superficially and left on the seabed, usually insufficiently protected.<sup>60</sup>

The term *archéologie navale* was introduced into professional literature in the second half of the nineteenth century by Auguste Jal<sup>61</sup> to officially denote the field of research which had commenced three centuries earlier in France with a synthesis of knowledge on Greek and Roman ships.<sup>62</sup> Due to a rapid increase in submarine and underwater exploration in the course of the 1960s and 1970s, the quantity of available information harvested from shipwrecks expanded greatly. At that time, the previously mentioned term *shipwreck archaeology* appeared. This term has not been widely accepted, but is still occasionally used in the present day.<sup>63</sup> Thanks to the spread of interest in the phenomenon of shipwrecks, stimulated in large

57 R. JURIC, S. OGUIĆ, B. VILHAR, 1982; R. JURIC, S. OGUIĆ, B. VILHAR, 1994. Godine 1994. u brodogradilištu u Betini izrađena su i dvije brodice inspirirane srednjovjekovnim nalazima.

58 H. FROST, 1973; H. FROST, 1976.

59 Z. BRUSIĆ, M. DOMIJAN, 1985, 71.

60 Nalazišta o kojima je riječ detaljno su opisana u: I. RADIĆ ROSSI, 2011, 231-239.

61 A. JAL, 1840. O Jalu i hrvatskom pomorskom nazivlju vidi J. LUETIĆ, 1957; M. ROŽMAN, 1994.

62 P. POMEY, E. RIETH, 2005, 7.

63 Usp. inačicu *archaeology of ships* (L. BASCH, 1972; P. JOHNSTON 1974), *archaeology of the boat* (B. GREENHILL, 1976) i *archaeology of boats and ships* (B. GREENHILL, J. S. MORRISON, 1995).

57 R. JURIC, S. OGUIĆ, B. VILHAR, 1982; R. JURIC, S. OGUIĆ, B. VILHAR, 1994. In 1994, in the Betina shipyard two boats were built, inspired by mediaeval finds.

58 H. FROST, 1973; H. FROST, 1976.

59 Z. BRUSIĆ, M. DOMIJAN, 1985, 71.

60 The sites in question are described in detail in I. RADIĆ ROSSI, 2011, 231-239.

61 A. JAL, 1840. On Jal and Croatian maritime nomenclature, see J. LUETIĆ, 1957; M. ROŽMAN, 1994.

62 P. POMEY, E. RIETH, 2005, 7.

63 Compare *archaeology of ships* (L. BASCH, 1972; P. JOHNSTON 1974), *archaeology of the boat* (B. GREENHILL, 1976) and *archaeology of boats and ships* (B. GREENHILL, J. S. MORRISON, 1995).

doloma) kojim su antropolozi upozorili na mnoge sofisticirane razine ljudskog ponašanja koje je moguće iščitati iz materijalnog konteksta tih osebnih zatvorenih cjelina.<sup>64</sup>

Tijekom vremena kratkotrajni se monopol podmorske i podvodne arheologije nad istraživanjem brodoloma pokazao neutemeljenim jer se mnogi značajni nalazi brodskih konstrukcija sve češće otkrivaju na nalazištima na kopnu. Navodeći mišljenje Seana McGraila, već je spomenuto kako se brodske konstrukcije na kopnu mogu naći iz više razloga, od onih kad se brod namjerno ukapa na kopnu za potrebe posljednjeg počivališta<sup>65</sup> do posljedica prirodnih pojava poput zamuljenja luka, izdizanja kopna, promjene riječnoga toka i sl. Osim toga, prema njegovim riječima, istraživanje broda može se odvijati na kopnu, može se brod izvaditi iz vode<sup>66</sup> ili voda iz broda<sup>67</sup>, ili se pak istraživanje mora provesti pod vodom istom metodologijom kao na kopnu.

Za razliku od arheologije pomorstva ili arheologije unutrašnjih voda, područje djelovanja arheologije broda nije prostorno ograničeno, ali je objekt proučavanja sveden isključivo na brod i sve njegove funkcije. Osim toga, stručnjaci svjetskoga glasa Patrice Pomey i Eric Rieth u svome su iscrpnom priručniku pod naslovom *L'archéologie navale* postavili gornju kronološku granicu do koje seže interes te znanstvene discipline, a kao *terminus ante quem* odredili početak industrijske ere.<sup>68</sup> Takvu odluku uzrokovale su činjenice da se tijekom 19. stoljeća drvo u brodogradnji zamjenjuje željezom, da se primjenjuju nove brodograđevne tehnike uvjetovane razvojem industrijskog kapital-

part by the diligent scientific work of a small group of enthusiasts led by Bass, the term *shipwreck anthropology* also appeared, through which anthropologists were able to discuss many sophisticated levels of human behaviour that can be gleaned from the material context of these specific closed assemblages.<sup>64</sup>

In time, the monopoly of submarine and underwater archaeology in the study of shipwrecks proved to be short-lived, as many significant ship construction finds began to be unearthed from sites on land. As Sean McGrail has noted, ship constructions on land can be present for several reasons, ranging from intentional interment on land in support of burials<sup>65</sup> to the consequences of natural phenomena such as the silting up of ports and harbours, elevation of the mainland, a change in river courses, etc. In addition, a ship can be explored on land, taken out of the water,<sup>66</sup> or water can be taken out of the ship,<sup>67</sup> or excavations may be conducted underwater using the same methodology as on land.

In contrast to maritime archaeology or the archaeology of inland waters, the scope of nautical archaeology is not spatially limited, but the object of study is reduced exclusively to ships and all their functions. In addition, renowned scholars Patrice Pomey and Eric Rieth in their detailed handbook entitled *L'archéologie navale* set the upper chronological border to which the interest of this scientific discipline applies. They determined the beginning of the industrial era as a *terminus ante quem*.<sup>68</sup> They based their decision on the fact that by the 19<sup>th</sup> century, shipbuilding timber had been replaced by iron, new shipbuilding techniques had been applied due to the development of industrial capitalism, and increas-

64 R. A. GOULD 1983, 5; D. J. LENIHAN, 1983, 52-62.

65 Usp. najpoznatiji primjer kenotafa Sutton Hoo: J. GREEN, 1963; R. BRUCE-MITFORD, 1972; A. C. EVANS, 1994.

66 U čitavom nizu primjera, najpoznatije projekte vađenja brodske konstrukcije predstavljaju *Vasa*, danas u vlastitom muzeju u Stockholmu (A. FRANZEN, 1961; E. CLASON, 1962; C. O. CEDERLUND, 2006), i *Mary Rose*, danas u Pomorskom muzeju u Portsmouthu (M. RULE, 1983; P. MARSEND, 2003; D. CHILDS, 2007). Najpoznatiji primjer izvađenog i do detalja proučenog antičkog broda predstavlja *Kyrenia* na Cipru (H. WYLDE-SWINEY, M. I. KATZEV, 1973; R. STEFFY, 1985; M. I. KATZEV, 2005; M. I. KATZEV, 2007).

67 Najpoznatiji primjer isušivanja plitkoga mora zbog dokumentiranja i/ili vađenja brodskih konstrukcija predstavljaju projekti *Skudelev* u Danskoj (O. CRUMLIN-PEDERSEN, O. OLSEN, 2002) i *San Marco in Boccalama* u Veneciji (M. D'AGOSTINO, S. MEDAS, 2003; AA.VV., 2003).

68 P. POMEY, E. RIETH, 2005, 11.

64 R. A. GOULD 1983, 5; D. J. LENIHAN, 1983, 52-62.

65 Compare the most famous example of the Sutton Hoo cenotaph: J. GREEN, 1963; R. BRUCE-MITFORD, 1972; A. C. EVANS, 1994.

66 In a whole range of examples, the most famous projects of salvaging ship constructions are the following: the *Vasa*, at present in the Vasa Museum in Stockholm (A. FRANZEN, 1961; E. CLASON, 1962; C. O. CEDERLUND, 2006), and the *Mary Rose*, currently in the Royal Naval Museum in Portsmouth (M. RULE, 1983; P. MARSEND, 2003; D. CHILDS, 2007). The most famous example of a Classical Antiquity ship rescued from the sea and studied in detail is the *Kyrenia* on Cyprus (H. WYLDE-SWINEY, M. I. KATZEV, 1973; R. STEFFY, 1985; M. I. KATZEV, 2005; M. I. KATZEV, 2007).

67 The most famous examples of drying out shallow sea for the sake of documenting and/or raising ship constructions were the *Skudelev* project in Denmark (O. CRUMLIN-PEDERSEN, O. OLSEN, 2002) and the *San Marco in Boccalama* in Venice (M. D'AGOSTINO, S. MEDAS, 2003; AA.VV., 2003).

68 P. POMEY, E. RIETH, 2005, 11.

izma i izrađuje sve obimnija, detaljnija i preciznija grafička i tekstovna dokumentacija.<sup>69</sup>

Isti su autori ponudili suvremenu definiciju arheologije broda kao dijela arheološke znanosti posvećenoga proučavanju brodova prošlih vremena neovisno o tipu, funkciji i podrijetlu, te njihovog tehničkog, funkcionalnog i socijalnog aspekta putem materijalnih ostataka, a u svjetlu pisanih, ikonografskih i etnografskih izvora.<sup>70</sup> Drugim riječima, objekt istraživanja arheologije broda predstavljali bi trgovački, ratni i ostali brodovi svih veličina i svih vremena koja prethode industrijskoj revoluciji, koji su plovili po moru ili unutrašnjim vodama. Problematika koja se postavlja odnosi se prije svega na procese osnivanja i konstruiranja broda kojima se nastoji ući u trag putem pozornog proučavanja arheoloških nalaza, uz korištenje podataka iz starih tekstova, likovnih prikaza i preživjele pomorske tradicije. Iako se to u tekstu eksplicitno ne navodi, razumljivo je samo po sebi kako svi elementi brodske opreme te načini njenoga korištenja također ulaze u domenu arheologije broda.

Razvoju arheologije broda doprinijeli su radovi mnogih autora, od kojih su neki poput Keitha Muckelroya i Seana McGraila posebno zaslužni za isticanje prednosti, ali i ograničenja komparativnih etnografskih podataka.<sup>71</sup> Tijekom posljednjih desetljeća sve više se ističe i etnoarheologija<sup>72</sup> koja ispravnu metodologiju za interpretaciju

ingly extensive, detailed and precise graphical and textual documentation had been generated.<sup>69</sup>

The same authors offered a contemporary definition of nautical archaeology as part of the archaeological science dedicated to the study of ships from the past, regardless of their type, function and origin, or their technical, functional and social aspect. This study was to be performed by means of material remains, and using written, iconographic and ethnographic sources.<sup>70</sup> In other words, the subject matter of nautical archaeology would be trading, military and other ships of all sizes and from all periods prior to the industrial revolution, which sailed on the seas or interior waters. The problem that emerges is related primarily to the processes of designing and constructing a ship. An attempt can be made to trace this by carefully studying archaeological finds, and at the same time using data from old texts, illustrations and surviving maritime tradition. Although this is not explicitly mentioned in the text, it is understandable that all the elements of a ship's equipment and the ways in which it is used are also covered by nautical archaeology.

The works of many authors have contributed to the development of nautical archaeology; some authors, such as Keith Muckelroy and Sean McGrail, are especially notable for pointing out the advantages but also disadvantages of comparative ethnographical data.<sup>71</sup> Over the past several decades, ethnoarchaeology<sup>72</sup> has become increasingly prominent,

69 Iako Pomey i Rieth upozoravaju kako u slučajevima kao što su brodovi za plovidbu unutrašnjim vodama, za ribarenje ili kabotažu često postoji vrlo skromna grafička i tekstovna dokumentacija, pa arheološki nalazi predstavljaju gotovo jedini izvor informacija, ipak ne odustaju od početka industrijske revolucije kao gornje granice arheologije broda. Uz dužno poštovanje autorima, autorica ovog rada izražava nedoumicu u postavljanje gornje kronološke granice koja može postati preprekom pri proučavanju prošlosti tradicijske brodogradnje. Iskustvo uči kako su predmeti koji izlaze iz domene jedne znanstvene discipline ne ulazeći istovremeno u domenu druge osuđeni na nebrigu i propast. Najzorniji primjer, koji je ujedno i po svome sadržaju najbliži našoj temi, predstavljaju monoksili (dubenice) iz unutrašnjih hrvatskih voda (I. RADIĆ ROSSI, 2009, gdje je navedena ostala literatura). Velikom većinom datirani u nekoliko posljednjih stoljeća, oni nikada nisu privukli pozornost arheologa. Istovremeno, njihova je starost bila dovoljna da na odstojanju zadrži i etnologue, pa su ti vrhunski predstavnici tradicijskog riječnog brodarstva danas uglavnom prepušteni na milost i nemilost vremenu. Osim toga, u relevantnoj se literaturi i proučavanje metalnih olupina svrstava u arheologiju broda (usp. npr. J. F. BASS, 2011, 5).

70 *Ibid.*, 10.

71 K. MUCKELROY, 1978, 7; S. McGRAIL, 1984.

72 R. A. GOULD, 1983, 15; S. McGRAIL, 2001, 3-4. Godine 2004. u Mondainu u Italiji održan je Treći nacionalni simpozij o etnoarheologiji na kojemu je posebna sekcija bila posvećena moru tj. pomorstvu: F. LUGLI, A. STOPIELLO, 2008.

69 Although Pomey and Rieth point out that ships intended for interior navigation, fishing or cabotage are often accompanied by extraordinarily modest graphical and textual documentation, so that archaeological finds represent almost the only source of information, they continue to define the beginning of the Industrial Revolution as the upper limit of nautical archaeology. With due respect to the authors, the author of this paper expresses her doubts as to setting the upper chronological limit, which could become an obstacle to the study of the past of traditional shipbuilding. We have learned from experience that objects which fall outside the scope of one scientific discipline without at the same time entering the scope of another are condemned to neglect and decay. The clearest example of this, the content of which is at the same time closest to our topic, are dugouts (boats made from one piece of wood) from Croatian interior waters (I. RADIĆ ROSSI, 2009, where other literature is quoted). The majority having been dated to the last few centuries, they have never attracted archaeologists' attention. At the same time, they were old enough to keep ethnologists at a distance, so that these superb representatives of traditional river craft are at present mostly left to the mercy of time. In addition, relevant literature also classifies the study of metal wrecks as part of nautical archaeology (compare e.g. G. F. BASS, 2011, 5).

70 *Ibid.*, 10.

71 K. MUCKELROY, 1978, 7; S. McGRAIL, 1984.

72 R. A. GOULD, 1983, 15; S. McGRAIL, 2001, 3-4. In 2004, in Mondaino in Italy, the Third International Symposium on Ethnoarchaeology took place, with a separate section dedicated to sea and maritime affairs: F. LUGLI, A. STOPIELLO, 2008.

arheoloških konteksta traži u kombinaciji metodologija obje znanosti, proučavajući na etnološkim primjerima zakonitosti po kojima se elementi materijalne i duhovne kulture pretvaraju u statične arheološke zapise.<sup>73</sup>

Veliko značenje nacrtanih rekonstrukcija i izrade vjernih replika brodova prošlih vremena afirmiralo se kroz rad Richarda Steffya, čija knjiga *Wooden Ship Building and the Interpretation of Shipwrecks*<sup>74</sup> predstavlja i danas teorijsku osnovu za sveobuhvatno proučavanje brodskih konstrukcija u okviru zasebne znanstvene discipline. Steffyjev znanstveni doprinos izučavanju ostataka brodova izvađenih iz podmorja najbolji je primjer kako su i stručnjaci koji ne silaze u podmorje danas nezostavni članovi ekipa koje istražuju podmorska arheološka nalazišta.<sup>75</sup>

### 3. ZAKLJUČAK

Sumiraju li se gore iznesene činjenice uviđa se kako je krajnji čas da se u hrvatskoj stručnoj i znanstvenoj literaturi uvriježe termini *arheologija pomorstva*, *arheologija unutrašnjih voda* i *arheologija broda* ili neki drugi odgovarajući termini koji svojim značenjem odgovaraju predmetu istraživanja tih znanstvenih disciplina. Čini se da primjerenost za sada predloženih termina nije potrebno dodatno opravdavati. Osim toga, oni su sami po sebi lako shvatljivi pa ih je moguće koristiti i bez posebnog obrazloženja. Korištenje termina pretpostavlja uspostavljanje svih pravila koja vrijede za određenu znanstvenu disciplinu te poštivanje njenih metodoloških načela. Upravo je to ono što je hrvatskoj znanosti desetljećima nedostajalo, a terminološki problem ostao je neriješen jer je tijekom sedamdesetih godina prošloga stoljeća zaustavljeno formiranje znanstvenih disciplina. One u današnje vrijeme, ustrojene na pravi način, mogu uvelike doprinijeti proučavanju prošlosti pomorstva na hrvatskom Jadranu, a u suradnji s etnologijom pomorstva i istraživanju, zaštiti i očuvanju hrvatske pomorske tradicije. Pozivajući se još jednom na mišljenje slavnog podmorskog istraživača G. F. Bassa, valja istaknuti kako se arheološko izučavanje

searching for an appropriate methodology to interpret archaeological contexts on the basis of a combination of methodologies of both sciences, using ethnological examples to study the laws according to which the elements of a material and spiritual culture are turned into static archaeological records.<sup>73</sup>

The enormous significance of reconstruction sketches and the making of reliable replicas of ships from the past has been affirmed through the work of Richard Steffy, whose book *Wooden Ship Building and the Interpretation of Shipwrecks*<sup>74</sup> today still represents a theoretical background for a comprehensive study of ship construction within separate scientific disciplines. Steffy's scientific contribution to the study of the remains of ships raised from the sea is the best example of how scholars who are not divers at present are inevitable members of teams exploring submarine archaeological sites.<sup>75</sup>

### 3. CONCLUSION

It is time for the standardization in Croatian professional and scientific literature of the terms *maritime archaeology* (*arheologija pomorstva*), *archaeology of inland waters* (*arheologija unutrašnjih voda*) and *nautical archaeology* (*arheologija broda*), or other suitable terms whose meaning corresponds to the studied subject matter of these scientific disciplines. It seems that the appropriateness of the currently proposed terms needs no further justification. They are easy to comprehend and can be used without any special argumentation. The use of the terms mandates the setting of rules that are valid for a certain scientific discipline, including respect for its methodological principles. This is precisely what Croatian science has lacked, and the terminology problem has remained unsolved since the 1970s because the establishment of scientific disciplines was stopped. At present, if structured in the right way, use of these terms could enhance the study of the history of all maritime activities in the Croatian Adriatic, while in co-operation with maritime ethnology they could potentially contribute to the study, protection and preservation of Croatian maritime tradition. Quoting once more the opinion

73 M. PORČIĆ, 2006, 106.

74 R. STEFFY, 2006 (1994).

75 G. F. BASS, 2011, 8.

73 M. PORČIĆ, 2006, 106.

74 R. STEFFY, 2006 (1994).

75 G. F. BASS, 2011, 8.

pomorskih kultura ne može izjednačiti s podvodnom arheologijom.<sup>76</sup>

Podmorska i podvodna arheologija, kao što smo vidjeli, ne predstavljaju znanstvene discipline u pravom smislu riječi već prije posebne tehnike arheoloških istraživanja. Ipak, popularnost dvaju naziva u domaćoj i međunarodnoj javnosti stvorila im je određeni identitet koji nema potrebe na silu mijenjati.<sup>77</sup> To se poglavito odnosi na širu javnost sklonu fascinaciji podmorskim otkrićima. Iako fascinacija arheološkim nalazima ne nosi uvijek pozitivan predznak,<sup>78</sup> ona može doprinijeti podizanju svijesti o potrebi zaštite i očuvanja podvodne i podmorske kulturne baštine. Stoga oba termina mogu i dalje mirno opstojati uz uvjet da ih stručnjaci u međusobnom komuniciranju koriste oprezno i s punim razumijevanjem opisane problematike. Unutar same struke njihova pogodnost očituje se u činjenici da se u tim terminima lako prepoznaju svi oni koji svoja istraživanja obavljaju u morskom ili slatkovodnom ambijentu neovisno o tome koriste li disalicu, aparat sa zrakom ili plinskom mješavinom, ili pak suvremenu tehničku opremu kojom se upravlja na daljinu; proučavaju li antičke brodolome, potonule luke, ostatke naselja i groblja, metalne olupine brodova i aviona ili se bave zahtjevnim postupcima konzerviranja i prezentiranja podvodnih arheoloških nalaza.

Da do uniformiranja terminologije nije došlo ni u engleskom jeziku najbolje pokazuje ne tako davno tiskan priručnik *International Handbook of Underwater Archaeology*, u kojemu autori podjednako koriste termine *underwater* i *maritime archaeology*, a u manjoj mjeri *nautical*, *shipwreck* i *archaeology in marine environment*.<sup>79</sup> Ipak, u predgovoru najnovijoj sveobuhvatnoj publikaciji na najvišoj znanstvenoj razini, *The Oxford Handbook of Maritime Archaeology*, glavni su urednici sažeto i jasno izrekli svu širinu arheologije pomorstva i njezinu posebnost u odnosu

of the famous submarine explorer G. F. Bass, the archaeological study of maritime cultures cannot be the same as underwater archaeology.<sup>76</sup>

Submarine and underwater archaeology, as we have seen, are not scientific disciplines in the literal sense of the word, but primarily represent special archaeological research techniques. Still, the popularity of the two concepts among the Croatian and international public has provided them with a certain identity, and change does need to be forced.<sup>77</sup> This is particularly true for the broader public that has a fascination for underwater discoveries. Although interest in archaeological finds is not always positive,<sup>78</sup> it can contribute to raising the awareness of the need for the protection and preservation of underwater and submarine cultural heritage. Therefore both terms can and should continue to coexist, provided that in their communications scholars use them carefully and with a full understanding of the described issues. Within the profession itself, their appropriateness is evident in the fact that the terms are easily recognized by all those conducting research in a sea or freshwater setting, regardless of whether snorkeling, scuba diving with compressed air or a gas mixture, or using modern remote-controlled technical equipment. These terms can be clearly and correctly applied to the exploration of Classical Antiquity shipwrecks, submerged ports, remains of settlements and cemeteries, metal shipwrecks and aircraft wrecks, as well as to issues regarding the conservation and presentation of archaeological underwater finds.

That the terminology has not been unified in the English language is most clearly visible from the recently published *International Handbook of Underwater Archaeology*, in which the authors synonymously use the terms *underwater* and *maritime archaeology*, and to a lesser extent *nautical*, *shipwreck* and *archaeology in a marine environment*.<sup>79</sup> Nevertheless, in a preface to the newest comprehensive publication at the highest scholarly level, *The*

76 G. F. BASS, 2011, 4.

77 Termin *underwater archaeology* promovirala je u novije vrijeme kampanja za ratifikaciju UNESCO-ve Konvencije o zaštiti podvodne kulturne baštine (*UNESCO Convention on the Protection of the Underwater Cultural Heritage*, Paris, 2 November 2001), iako se on u Konvenciji spominje samo jednom u vezi s osposobljavanjem za podvodna arheološka istraživanja (Čl. 21). Korištenje toga termina u potpunosti je opravdano pri postavljanju pravila istraživanja i zaštite podvodne kulturne baštine, ali je krajnje ograničavajuće u slučaju imenovanja znanstvenih tj. akademskih disciplina.

78 J. A. SPERRY, 2008.

79 C. V. RUPPÉ, J. F. BARSTAD, 2002.

76 G. F. BASS, 2011, 4.

77 The term *underwater archaeology* has also been newly promoted by the campaign for the ratification of the UNESCO Convention on the Protection of the Underwater Cultural Heritage, Paris, 2 November 2001, although the Convention mentions it only once, in relation to underwater archaeological excavation training (Article 21). The use of the term is fully justified when setting the rules for the exploration and protection of underwater cultural heritage, but at the same time is extremely limiting when defining scientific, i.e. academic disciplines.

78 J. A. SPERRY, 2008.

79 C. V. RUPPÉ, J. F. BARSTAD, 2002.

na ostale arheološke discipline.<sup>80</sup> Iako se, po njihovim riječima, ona poglavito bavila podvodnim nalazištima, u današnje je vrijeme obuhvatila sveukupnu pomorsku kulturu čiji je povijesni razvoj bio izrazito uvjetovan morem i snažno o njemu ovisan.<sup>81</sup> U skladu s time, tekstovi su organizirani u nekoliko velikih poglavlja, od kojih se jedno bavi metodologijom istraživanja i obradom podataka, drugo brodovima i brodolomima, treće pomorskom kulturom i životom na obali, a četvrto menadžmentom pomorske baštine i interakcijom s ostalim dionicima njezinoga istraživanja, zaštite i održivoga korištenja.

Nasilne su promjene nepotrebne i u većini slučajeva osuđene na propast. Stoga postojeće nazive ne treba otklanjati niti mijenjati, naročito kad je u pitanju njihovo korištenje u široj javnosti. To međutim ne sprječava hrvatsku arheologiju da jasno definira i precizno imenuje znanstvene discipline kojima se bavi proučavajući prošlost ljudskog života na moru i unutrašnjim vodama, kako bi napokon krenula ukorak sa svjetskom znanosti te, poštivanjem njezinih visokih standarda, smanjila razinu nepovjerenja koja se često manifestira od strane drugih arheoloških disciplina.<sup>82</sup>

*Oxford Handbook of Maritime Archaeology*, the editors-in-chief have briefly and clearly expressed the broadness of maritime archaeology and its specific nature compared to other archaeological disciplines.<sup>80</sup> Although according to them maritime archaeology mostly deals with underwater sites, it also encompasses the entire maritime culture, whose historical development has been greatly conditioned by and largely dependent on the sea.<sup>81</sup> Consequently, the texts are organized into several large chapters, of which one deals with the methodology of research and with data processing, another with ships and shipwrecks, a third with maritime culture and life on the coast, and a fourth with maritime heritage management and interaction with other stakeholders in its exploration, protection and sustainable use.

Forcible change is unnecessary and in most cases condemned to failure. Therefore, existing names need not be removed or changed, particularly when they are used by the general public. Still, this does not prevent Croatian archaeology from clearly defining and precisely naming the scientific disciplines it deals with while studying the history of human activity at sea and on inland waters, in order to keep up with global science and, by establishing clear concepts and maintaining high standards, negate the possibility of distrust which is often manifested by other archaeological disciplines.<sup>82</sup>

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80 A. CATSAMBIS, B. FORD, D. HAMILTON, 2011, XIII-XVII.

81 *Ibid.*, XIV.

82 Riječ je o problemu s kojim se sedamdesetih i osamdesetih godina žestoko borio George Bass i njegovi suradnici (G. F. BASS, 1983), ali koji još uvijek nije u potpunosti prevladan.

80 A. CATSAMBIS, B. FORD, D. HAMILTON, 2011, XIII-XVII.

81 *Ibid.*, XIV.

82 This is a problem which George Bass and his collaborators intensively dealt with in the seventies and eighties (G. F. BASS, 1983), and which has still not been fully overcome.

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