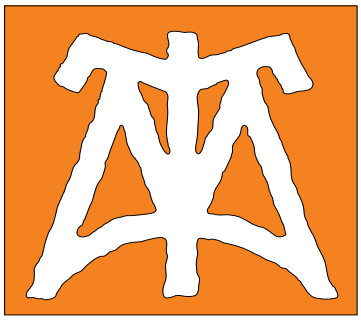
Väino Poikalainen
Enn Ernits

ROCK CARVINGS OF LAKE ONEGA

THE BESOV NOS REGION

Karetski and Peri Localities



Estonian Society of Prehistoric Art
Tartu 2019

Rock Carvings of Lake Onega
The Besov Nos Region. Karetski and Peri Localities
2019

Published by
Estonian Society of Prehistoric Art
&
Teadus ja Tegu OÜ

Aretuse 2, Märja, Tartu
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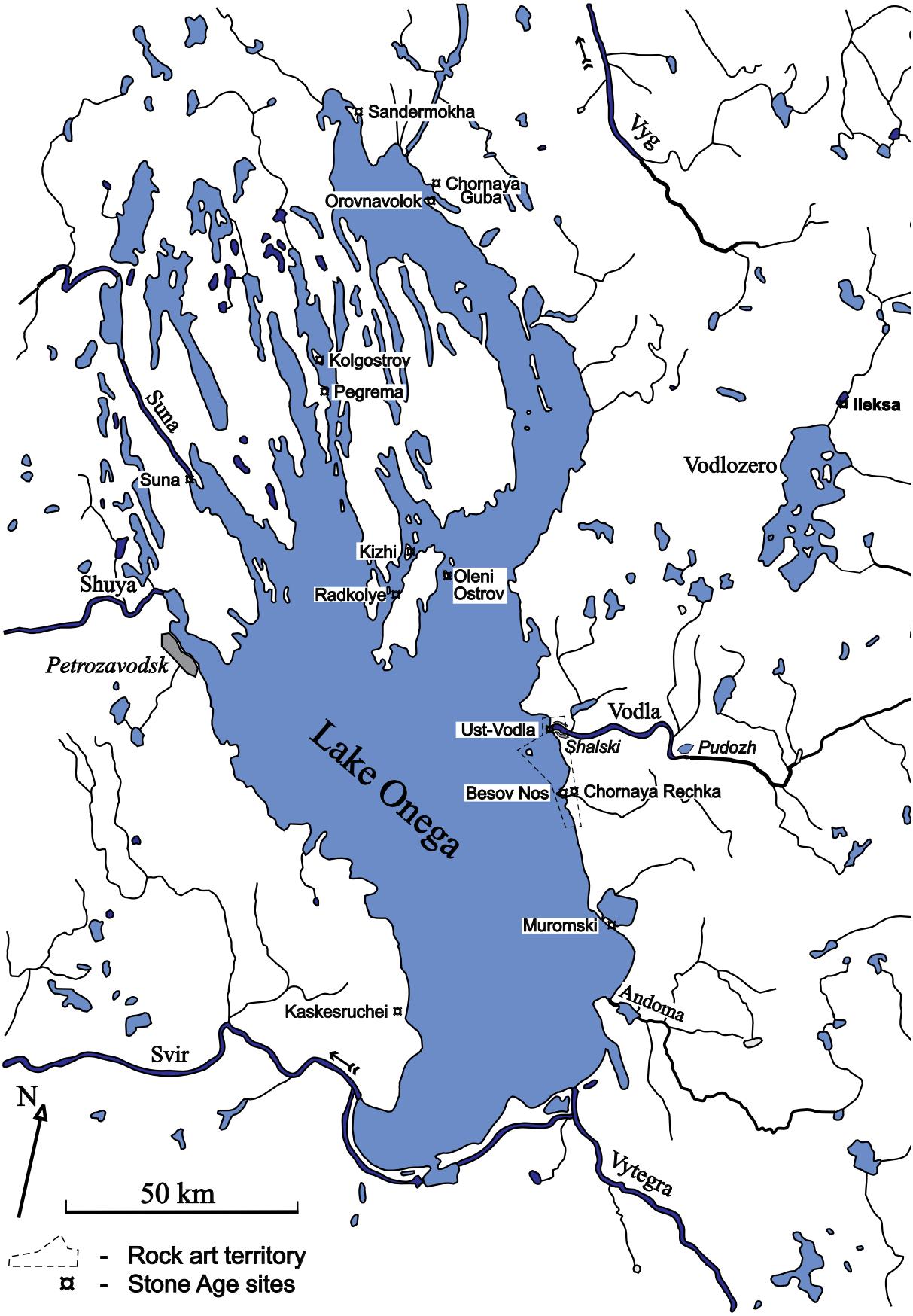
ISBN --------

Printed in Estonia

TABLE OF CONTENTS



Lake Onega and its surroundings. Map: V. Poikalainen 2018.

PREFACE

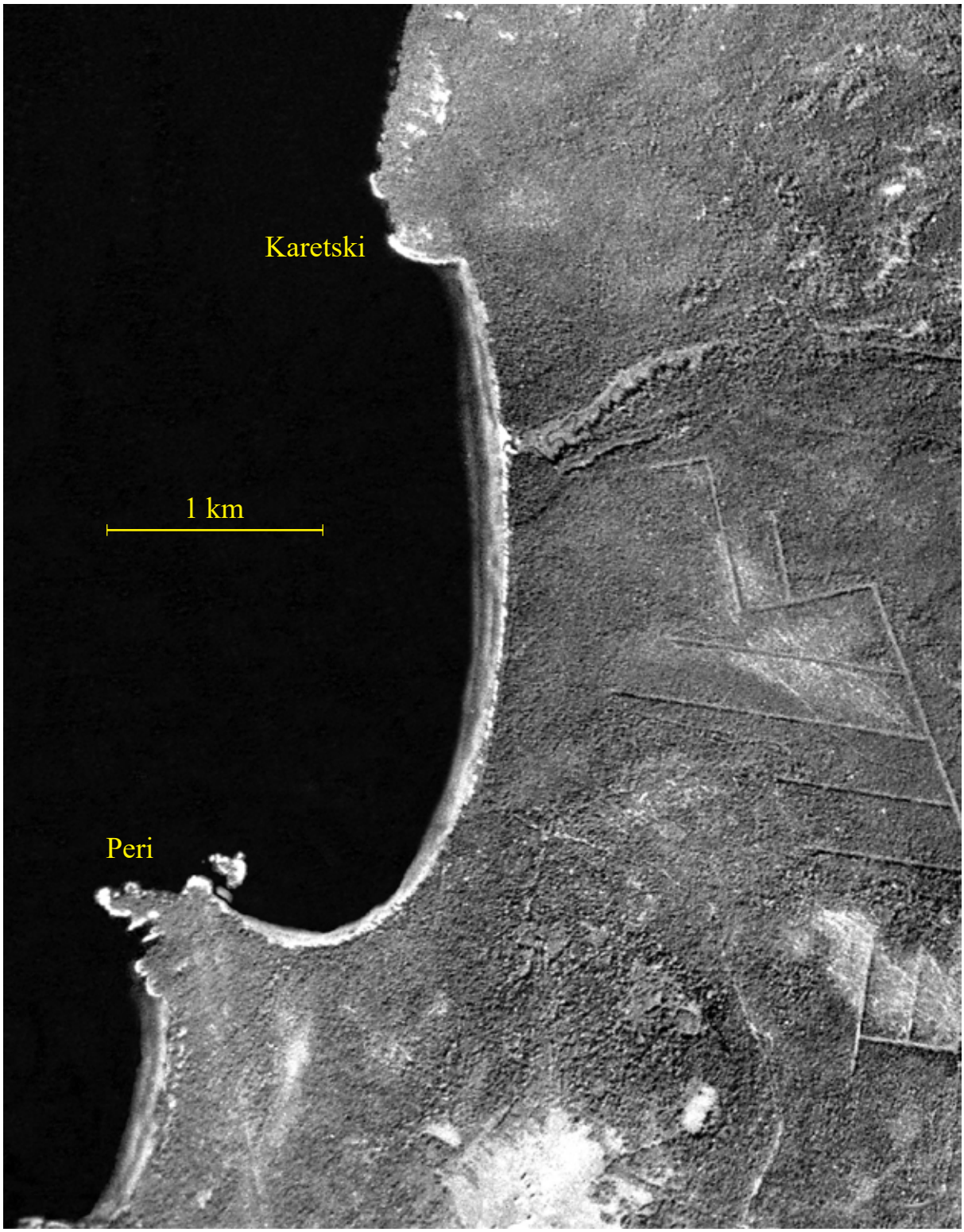
Rock carvings of Lake Onega represent a valuable part of hunters' rock art in the Northern Hemisphere and the world. The study of these has quite a long history, in which the Estonian Society of Prehistoric Art has a certain role. The most considerable achievements of the Society have been the discovery of new sites of Cape Swan and formerly unknown carvings throughout the whole territory, documentation of all sites (from 1982 to 1996), and publication of a catalogue of the petroglyphs of the Vodla region (Poikalainen, Ernits 1998). This northernmost part of the entire rock-art territory includes the Kochkov-Navolok Peninsula and Bolshoi Golets Island of the Shalskiye Ostrova archipelago.

The structure of the catalogue is based on graphic information of different hierarchical levels, from a general map to separate carvings, united with a grid network penetrating all these layers. Besides graphic representation, the carvings are also characterized parametrically and described verbally. The verbal description of the biomorphs is based on the international terminology used in human and veterinary anatomy. This kind of complex approach has been highly evaluated by rock art researchers. It has been expected that the material on the sites of the Besov Nos Region will also be published according to the same structure to satisfy the constant need for an integral publication, which could serve as source material for the studies of prehistory, religion, art history, and as a mean for planning management, propagation, protection, etc. activities.

Unfortunately, the planned publishing of the materal of the other sites at Lake Onega was delayed for 20 years for several reasons. Meanwhile, many archaeological excavations were carried out and new findings of rock art were made throughout the territory especially by Karelian archaeologists. Aleksandr Zhulnikov and his team have revealed separate rock slabs with carvings at Peri 6 (Zhulnikov 2010). Nadezhda Lobanova has found new carving groups on Mikhailovets Island and at Cape Koryushkin (Koreshnitsa), and many formerly unknown carvings especially at Karetski site. Her most important achievement is the publication of a monograph about Lake Onega carvings in Russian (Lobanova 2015). At the same time, she is the co-author of another valuable monograph dealing with the archaeological sites of the rock art territory (Lobanova, Filatova 2015).

Despite the new publication, the need for publishing the material collected by the Estonian Society of Prehistoric Art is acute still. Though the main documentation on separate carvings, groups and sites was compiled from 1993 to 1996, the gathered data, drawings, photos and parametric information of earlier (especially from 1986 to 1992) and later (especially from 1998 to 2012) expeditions are valuable as well. Its diversity in graphic representation of maps, plans, carving groups and separate carvings with parametric and verbal descriptions will complement the pool of existing knowledge internationally. The current volume attempts to address these demands considering the sites of Cape Karetski and Cape Peri localities. It also includes references to the material published by Lobanova, Zhulnikov and other researchers which was not covered by our documentation. We hope that this type of updating makes the publication more complete, and convenient to readers. The other localities of the Besov Nos Region (Besov Nos, Kladovets, Gazhi and Guri) will be the topics of the next volume.

We are aware of the possible inaccuracies in the present material and request an understanding attitude from the users of this book. We would also appreciate any comments or suggestions for the future. All proposals and opinions are welcome.



Northern part of the Besov Nos Region with Karetski and Peri localities. Aerial photograph taken in 1984: Archives of the Estonian Institute of Melioration.

TERMS AND ABBREVIATIONS

The following list includes 1) terms and abbreviations of the verbal and parametric description of objects (cf. Methods of Documentation); 2) bibliographical abbreviations. It does not contain compound terms, such as dorso-dorsocranial, ornitho-theriomorph, ventrocaudal etc.

abdominal pertaining to the belly-like portion of a carving; cf. ventral

abducted moved away from the body midline (about a limb-like portion of a carving)

abiomorph carving which has a non-living (abiotic) prototype; cf. biomorph

ALC → alcomorph

alcomorph elk-like carving; cf. elaphomorph

ALO → alopecomorph

alopecomorph fox-like carving

AN → anthropomorph

anthropomorph human-like carving

AR → arctomorph

arctomorph bear-like carving

AS → astromorph

astromorph common name for sun- and moon-like carvings; cf. heliomorph, selenomorph

Aut = E. Autio

biomorph carving which has a biological prototype; cf. abiomorph

Br = A. Ya. Bryusov

Brk = M. C. Burkitt

carpal joint the wrist joint-like portion of a carving

CAS → castoromorph

castoromorph beaver-like carving

COP → copomorph

copomorph oar-like carving

COR → corynomorph

corynomorph hunting club-like carving

caudal situated toward the tail-like portion of a carving; cf. cranial, rostral

composite carving carving consisting of two or more contacted (cf. contact) subordinated components, e.g. anthropomorph with tool/weapon-like objects, scaphomorphs with anthropomorphs; cf. compound petroglyph

compound carving carving consisting of two or more contacted (cf. contact) equivalent carvings, e.g. elapho-cycnomorph; cf. composite petroglyph

connect join compositionally; cf. contact

contact join physically; cf. connect

cranial situated toward the head-like portion of a carving; cf. caudal, rostral

crurotarsal joint ankle-joint-like portion of a bird-like carving

CYC → cycnomorph

cycnomorph swan-like carving

CYN → cynomorph

cynomorph dog-like carving

D = relative depth of a carving

DE → dendromorph

definite carving carving, the prototype of which is identified; cf. indefinite petroglyph

dendromorph tree-like carving

DER → deraiomorph

deraiomorph necklace-like carving

dewlap a fold of loose, hanging skin-like portion of an alcomorph

digital pertaining to the toe-like portion of a carving

distal situated far from a point of reference or far from the trunk-like portion of a carving (about limb-like parts); cf. proximal

documentation recording and description of a carving by graphic, parametric, photographic, photometric, verbal, etc. methods

dorsal situated toward to the back of an animal-like carving or toward the hind surface of the foot-like portion of a carving; cf. ventral, palmar, plantar

EL → elaphomorph

elaphomorph deer-like carving (having the

shape of an animal of the family *Cervidae*: deer, elk, reindeer); cf. alcomorph

EN → enhydromorph

enhydromorph otter-like carving

Ern = E. Ernits

fetlock joint the most proximal (nearest to the trunk) toe-joint-like portion of an animal-like carving

foot terminal part of the lower limb-like portion extending from the ankle to the toes in a human-like carving; terminal part of the limb-like portion of an animal-like carving extending from the wrist/ankle to the toes; cf. hand, limb

GE → geranomorph

geranomorph crane-like carving

Gos. = Gosudarstvennyi, Gosudarstvennaya, etc. (in the references)

Gr = C. Grewingk

H = height of a carving from the water level at the Northern Cape Swan site on 27 July 1993

Hal = G. Hallström

hand terminal part of the limb-like portion extending from the wrist to the fingers in a human-like carving; cf. foot, limb

HE → heliomorph

heliomorph sun-like carving; cf. astromorph, selenomorph

Hen = G. Hendriksson

Hls. = Helsinki (used in the references)

hock ankle of a deer-like or bird-like carving

HY → hydrornithomorph

hydrornithomorph waterfowl-like carving

I = angle of inclination of the rock surface with the carving toward the horizontal plain

ICH → ichthyomorph

ichthyomorph fish-like carving

identification estimation of a natural prototype of a carving

IN → indefinite carving

indefinite carving carving, the prototype of which is not identified

indefinite orientation undefined direction of the body-like portion in anthropomorphs and zoomorphs or the same of the stem-like portion in scaphomorphs; cf. left orientation, orientation, right orientation

interpretation ascription of a meaning to a carving or group of carvings

IO → indefinite orientation

L. = Leningrad (used in the references)

left orientation left direction of the body-like portion in anthropomorphs and zoomorphs depicted in profile or the same of the stem-like portion in scaphomorphs; cf. indefinite orientation, orientation, right orientation

leg part of the limb-like portion of a carving between the knee- and foot-like portions

limb jointed appendage of a human/animal body-like carving, including hand/foot; cf. hand, foot

Lin = A. M. Linevski

LO → left orientation

Lob = N. V. Lobanova

LS = the longest measure of a carving

Lsh = K. D. Laushkin

LY → lycomorph

lycomorph wolf-like carving

M. = Moskva (Moscow; used in the references)

metacarpal region part of a hand-like portion (in a human-like carving) or a forelimb-like portion (in an animal-like carving) between the wrist and toes; cf. metatarsal region

metatarsal region the part of a hindlimb-like portion between the ankle and the toes in a carving; cf. metacarpal region

Mor = F. M. Morozov

muzzle the forward projecting mouth and nose-like portion of an animal-like carving

OOM → oomorph

oomorph egg-like carving

OPH → ophiomorph

ophiomorph snake-like carving (having the shape of a snake or a limbless lizard – slow-worm); cf. sauromorph

OR → ornithomorph

orientation left/right direction of the body-like portion in anthropomorphs and zoomorphs depicted in profile or the same of the stem-like portion in scaphomorphs; cf. indefinite orientation, left orientation, right orientation

ornithomorph bird-like carving

OZ → other zoomorph (in Tables)

P = degree of preservation of a carving

palmar situated toward the palm surface of the forelimb-like portion of a carving; cf. dorsal, plantar

pectoral pertaining to the breast-like portion of a carving

petroglyph rock carving

PH → phalaenomorph

phalaenomorph seal-like carving

Pkl = V. Poikalainen

plantar situated toward the sole of the hind-limb-like portion of a carving; cf. dorsal, palmar

pronated rotated inwards (about a limb-like portion of a carving); cf. supinated

proximal situated near a point of reference or to the trunk-like portion of a carving (about limb-like parts); cf. distal

Ptz. = Petrozavodsk (used in the references)

Rav = V. I. Ravdonikas

right orientation right direction of the body-like portion in anthropomorphs and zoomorphs depicted in profile or the same of the stem-like portion in scaphomorphs; cf. indefinite orientation, left orientation, orientation

RO → right orientation

rostral situated toward the tip of the nose/beak-like portion of a carving; cf. cranial, caudal

SA → sauromorph

sauromorph lizard-like carving (having the shape of a four-footed lizard); cf. ophiomorph

Sav = Yu. A. Savvateyev

SCA → scaphomorph

scapanomorph spade-like carving

scaphomorph boat-like carving

SCE → sceuomorph

sceuomorph carcass-like carving (having the shape of a carcass or of some other kinds of constructions)

sciuromorph squirrel-like carving

SCP → scapanomorph

SE → selenomorph

selenomorph moon-like carving (having the shape of a crescent/waning moon); cf. astromorph, heliomorph

Sov. = Sovetski, Sovetskaya, etc. (used in the references)

Sp = A. A. Spitsyn

stifle joint-like portion of a beast-like carving analogous to the knee-joint-like portion of a human-like carving

supinated rotated outwards (about a limb-like portion of a carving); cf. pronated

tarsal joint ankle-joint-like portion of a carving

TH → theriomorph

theriomorph beast-like carving (having the shape of a four-footed mammal); cf. anthropomorph, phalaenomorph, zoomorph

thigh part of the limb-like portion of a carving between the hip and the knee/stifle

Tln. = Tallinn (used in the references)

Trt. = Tartu (used in the references)

trunk 1. part of the body-like portion of a human- or animal-like carving, excluding head-, neck-, tail- and limb-like structures; 2. the main stem-like portion of a tree-like carving, excluding branch-like and root-like structures

V = visibility of a carving

ventral situated toward the belly-like portion of a carving; dorsal, abdominal

Zhl = A. M. Zhulnikov

zoomorph animal-like carving (having the shape of any kind of animal), incl. bird-, fish-, lizard- and snake-like carvings, if the carving prototype is not more precisely definable; cf. anthropomorph, theriomorph

Artistic copying of carvings at Cape Karetski. Photo: V. Poikalainen 1984.

Estimation of carvings' depth, preservation and visibility levels at Peri 3. Photo: E. Suonio 1989.

METHODS OF DOCUMENTATION

The main recording of carvings, groups and sites for this volume was performed from 1993 to 1999. The parametric documentation of the carvings was carried out mainly from 1988 to 1996. Some details of all kinds of recordings were updated during sporadic visits and excursions to the sites from 1998 to 2014. The conversion of the recorded photometric material to computer graphics and the verbal descriptions of the carvings were executed from 2010 to 2018. For all these purposes suitable methods have been devised.

Photometric Documentation

Carvings and carving groups were photometrically recorded using two different procedures: 1) Photography of the carving groups was carried out from a tripod ladder at a height of 2.5–3.0 metres against a 1 × 1 m grid attached to rock surface. In general, 2–4 square metres of the rock surface with grid marks were covered by one shot; 2) Close-range photography of single carvings with scale ruler and compass indicating the northward direction was made separately.

During later office work, these photographs were processed into vectorized graphic images using the COREL software package. This package was also used for editing perspective distortions caused by somewhat oblique photography from the tripod ladder. After correction of distortions, the corrected images were scaled and used for compilation of plans of the carving groups, panels and sites. Close-range photographs of single petroglyphs were also elaborated into vectorized outlines of carving.

Photometric documentation methods have been described in detail in our earlier publication (Poikalainen, Ernits 1998).

Parametric Documentation

Parametric documentation of carvings included the estimation and registration of the following parameters of the carvings:

1) longest measure (LS),

2) height from water level (H),

3) inclination of the rock surface in relation to the horizontal plane (I),

4) depth of the carving (D),

5) preservation level (P),

6) visibility level (V),

7) direction of the inclination,

8) orientation of the carving in relation to the northward direction.

The longest measure of the carvings and their height from water level was estimated in centimetres and the inclination of the rock surface in degrees.

For the depth evaluation of the carved grooves, a 6-level scale was applied, with the assumption that the lowest level corresponds to the mean depth of up to 1 mm and the highest level to the depth of 3–4 mm and more. This evaluation was carried out by subjective comparison of different carvings.

For the estimation of preservation and visibility levels, subjective scales were used. The preservation parameter helps to make decisions about the reliability of the carving outlines given in the catalogue (TABLE 1). The visibility parameter can be useful for those who want to locate certain carvings *in situ* (TABLE 2).

TABLE 1. The preservation scale.

P	Description
1	Carving is very heavily weathered or destroyed; the image prototype can either not be recognized or can be recognized only with a great deal of uncertainty.
2	Carving is weathered or destroyed to a great extent, the chipping marks are badly weathered and can not be clearly differentiated from marks left by erosion; the image prototype can be recognized with some uncertainty.
3	Carving is satisfactorily preserved; some parts may be destroyed or weathered away but missing parts of the carving outline can be guessed; chipping marks are distinctly weathered.
4	Carving is well preserved, but some smaller details have been lost to weathering; chipping marks may show some signs of weathering.
5	Carving is preserved in detail; the edges of it and chipping marks do not show noticeable signs of weathering.

TABLE 2. The visibility scale.

V	Description
1	Carving is visible only in clear weather with strong and oblique light (at sunset, night-time lighting).
2	Carving is visible in clear weather with oblique light (in evening or morning sunlight).
3	Carving is visible in clear weather.
4	Carving is visible in cloudy weather.
5	Carving is visible in any kind of weather and lighting conditions.

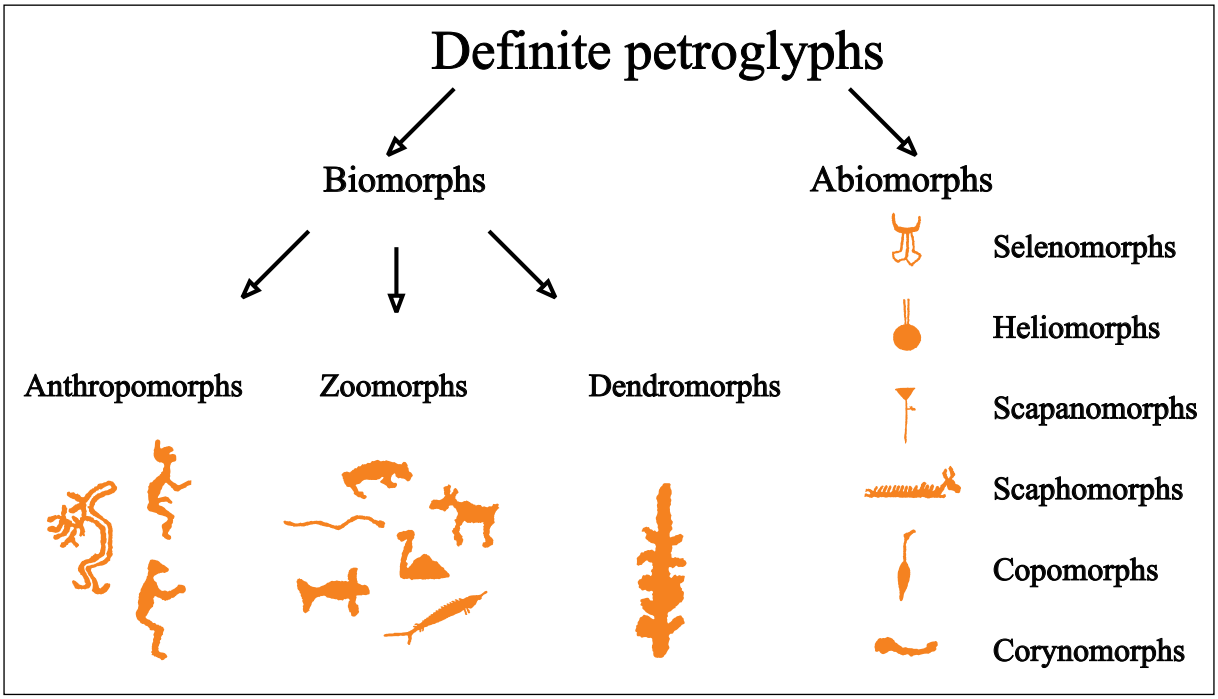
Verbal Documentation

The verbal documentation of petroglyphs included the following components:

1) Identification:
   a. classification,
   b. projection of anthropomorphs and zoomorphs,
   c. left/right orientation,
   d. description of carving elements.
2) Connection/contact with cracks and neighbouring petroglyphs;
3) Identification and interpretation by other researchers.

CLASSIFICATION. Petroglyphs are primarily divided into definite and indefinite ones (for a complete explanation of terms, see TERMS AND ABBREVIATIONS).

Definite carvings were divided into biomorphs and abiomorphs. Biomorphs include anthropomorphs, zoomorphs and dendromorphs. In contrast to zoological classification, anthropomorphs form a separate group. The element -morph (instead of the element -morph, -glyph could also be used, e.g. anthropoglyph, elaphoglyph, scaphoglyph etc.) is indispensable, because, for example, a bird-like figure need not reflect a biological bird but an ornithomorphic deity.



Classification of definite petroglyphs. Graphics: V. Poikalainen, 2018.

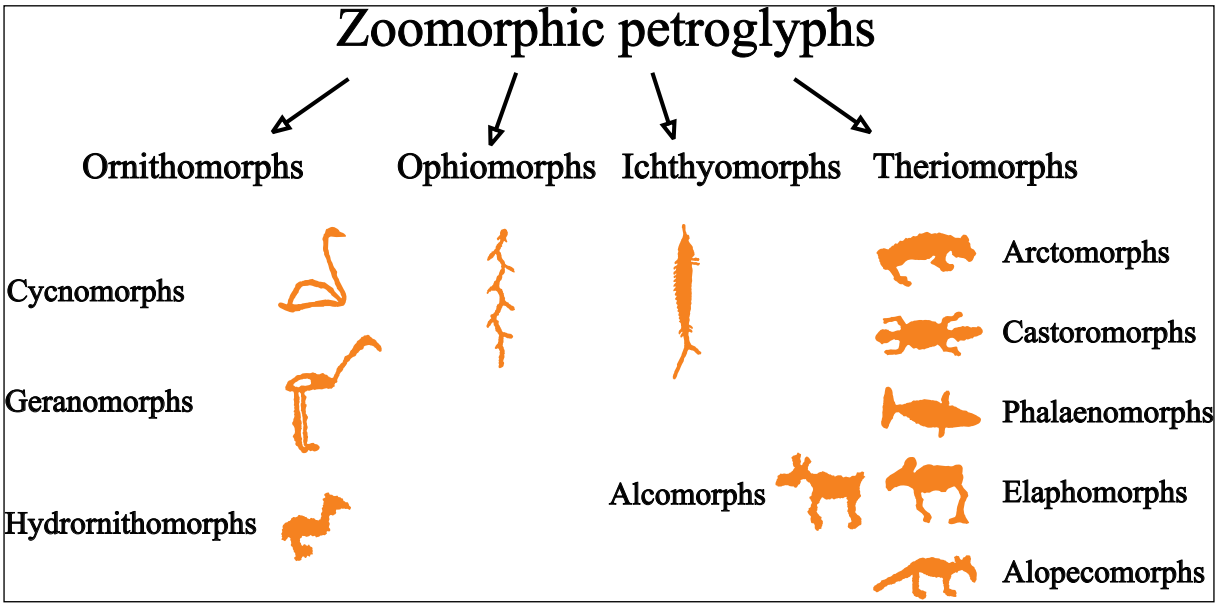
The systematisation of zoomorphs originates from the rules of zoological taxonomy. Zoomorphs were classified on the basis of their resemblance with their zoological prototypes. Of these, only vertebrates are depicted on the rocks of Lake Onega.

Mammal prototypes were more precisely identified. They include the order *Cetacea* (phalaenomorphs), the families *Castoridae* (castoromorphs), *Cervidae* (elaphomorphs) and *Ursidae*

(arctomorphs), the genera (often also species) *Alces* (alcomorphs), *Canis* (lycomorphs, cynomorphs), *Lutra* (enhydromorphs), and *Vulpes* (alopecomorphs)[1].

Among ornithomorphs we have differentiated only between geranomorphs and cycnomorphs. In addition to these, the term *hydrornitomorph* is often used.

We have also distinguished between single, composite and compound carvings. Abiomorphs are classified on the grounds of their resemblance with contemporary objects.



Classification of zoomorphs. Graphics: V. Poikalainen, 2018.

PROJECTION. The anthropomorphs have been depicted both in profile and in frontal/rear view. Zoomorphs usually occur in profile or projected from above/below.

LEFT/RIGHT ORIENTATION. For anthropomorphs, zoomorphs and scaphomorphs which have been depicted in profile, it is possible to distinguish between the left and the right orientation from the caudal aspect (cf. DIRECTIONS).

DESCRIPTION OF THE CARVING PARTS. In the description string, the parts of a carving which follow the colon are in subordinate relation to those preceding, e.g. head: two ears. The semicolon differentiates equivalent elements.

In the anthropomorphs' and zoomorphs' descriptions, the presence/lack of major parts of the body (head, neck, trunk, tail, limbs), their shape and relative size, and exceptional morphological features are described. Fragmentary/destroyed, silhouetted, contoured and linear petroglyphs are distinguished also.

DIRECTIONS OF THE BODY PARTS. The terms of directions are estimated pair-wise (cranial – caudal, dorsal – palmar etc.; see also TERMS AND ABBREVIATIONS). To make the description more precise, the combined directions between cranial/caudal and dorsal/ventral or between dorsocranial/dorsocaudal and cranial/caudal etc. were applied. The use of directions of the muzzle, beak, neck, tail, and limbs is not conventional. These directions are regarded as prolongations of those in the trunk.

DESCRIPTIONS OF THE PARTS OF THE BODY are based on the following scheme:

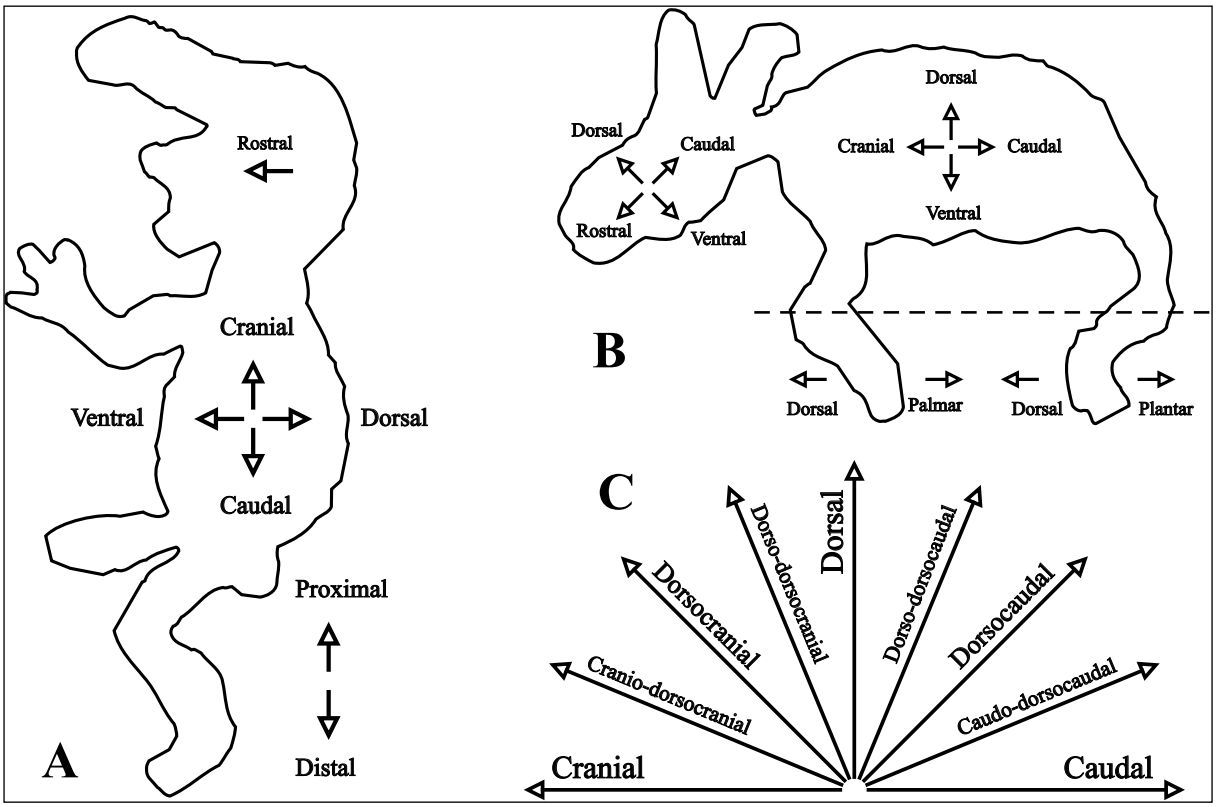
The head. In anthropomorphs, the shape and size of the head, presence and shape of the

1 This classification system enables one to create terms for zoomorphs of other rock art territories too.

nose; in theriomorphs the presence/lack, shape and size of the ears and antlers, the direction of the muzzle; in ornithomorphs, the shape, size, and direction of the beak; in the elaphomorphs, the presence of the throat dewlap.

The neck. Its length, direction and (in ornithomorphs) straightness/curvaceousness.

The trunk. The shape and relative size of the trunk. The straightness, convexity, concavity, and angularity of the dorsal and abdominal lines. The presence of withers in elaphomorphs. The shape and size of the trunk, and number of bends in ophiomorphs.



A: anatomical directions of anthropomorphs, B: anatomical directions of zoomorphs, C: combined directions. Graphics: V. Poikalainen, 2018.

The tail. Its shape and size, and direction of the tail end.

The limbs. The shape, length, thickness, direction, existence and position of joints (flexed, supinated etc.), the presence/lack of digits, normality/abnormality of the position of the limbs. A terminological difference exists between the limbs' parts in anthropomorphs and zoomorphs.

For the **scaphomorphs,** the shape and size of the prow, hull, and other distinctive features (perpendicular lines etc.) are described.

CONNECTION/CONTACT WITH CRACKS AND NEIGHBOURING CARVINGS will be mentioned if a petroglyph is either connected or in contact with other carvings or cracks.

DATA ABOUT PREVIOUS IDENTIFICATION AND INTERPRETATION are described briefly with references, after the ■ sign (cf. Parametric and Verbal Representation of the Carvings).

Every description of a carving in the catalogue begins with the letter indicating the site (G,

H. I, J, etc.), carving group within the site (Roman numeral) and carving number within the group (Arabic numeral).

EXAMPLES

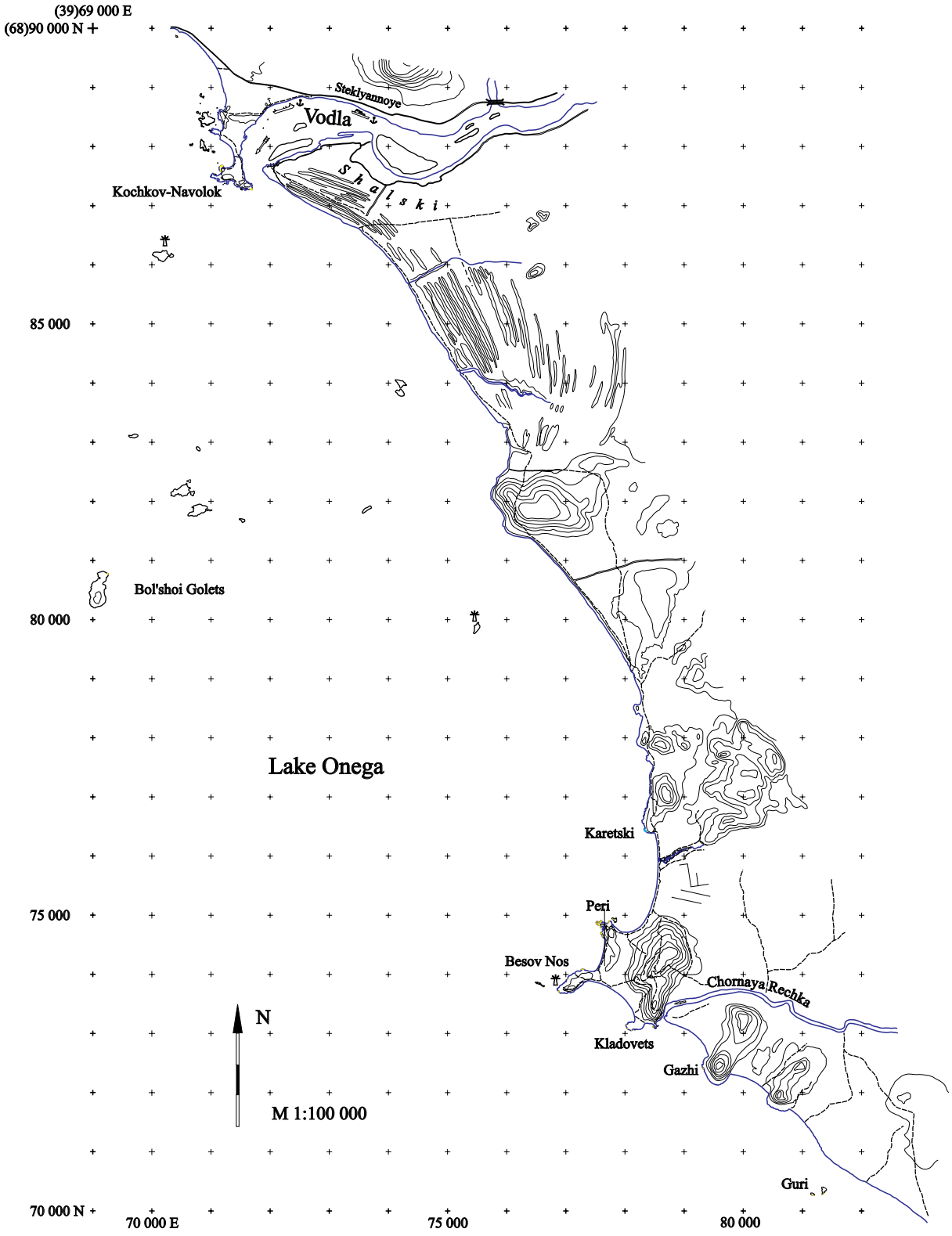
G-I-2 ▲ 76457.1-78327.1 ● cycnomorph ● to the right ● rostro-ventrorostrally directed beak ● very long, straight, dorsally directed neck ● contoured trunk: convex dorsal line; straight abdominal line ● without tail ● hindlimb: toes ● LS 10 cm, P 4, V 2, D 3, I 8˚, H 71cm ■ G-I-1 & 2: composition: bird (swan): two hindlimbs (Rav 1936c: 35-2, N 1-2) ♦ supernatural swan, creator of universe (Lsh 1962: 277) ♦ swan: one limb (Sav 1983: 99; 1984a: 102; Lob 2015: 75-3, N 37-3, N 39-A)

K-V-9 ▲ 74893.0-77525.7 ● anthropomorph (male) ● one of the compound carvings K-V-9 & 10 ● to the right ● head: head-wear?; nose?; chin; open mouth ● long neck ● trunk: convex dorsal line; straight abdominal line; curved phallus; small buttocks ● upper limb: flexed elbow joint ● lower limb: flexed hip- & knee joints; dick leg calf; tarsal joint; foot ● LS 19 cm, P 5, V 4, D 4, I 5˚, H 55 cm ■ K-V-9 & 10: human being strangling a gigantic bird (Lin 1928: 20) ♦ K-V-9&10: human being keeping neck of a gigantic bird (Lin 1928 (1929): 60, N 6) ♦ human being (Rav 1936c: 52-6, N 7-6) ♦ K-V-9 & 10: lucky hunter killed a colossal bird (Lin 1939d: 91, N 28[-2]) ♦ K-V-9 & 10: mythic being (lake deity?): oar [= “Animated oar”] (Lsh 1962: 294) ♦ K-V-9 & 10: man: oar-form object (Sav 1983: 85; Sav 1984a: 84) ♦ K-V-9 & 10: A-compound carving (Pkl 1990d: 67, N 26a) ♦ anthropomorph (man) (Lob 2015: 123-31, N 76-30)

G-XV-20 ▲ 76426.0-78344.6 ● elaphomorph ● to the right ● head: ear?; ventrorostrally directed muzzle ● long, cranio-dorsocranially directed neck ● slender silhouette trunk: straight dorsal & abdominal lines ● short, dorso-dorsocaudally directed tail ● thick forelimb: elbow- & carpal joints; toes ● thick hindlimb: abnormal joints; toes / partly human hindlimb: knee joint; foot ● LS 29 cm, P 5, V 4, D 6, I 10˚, H 189 cm ■ species of Cervidae (reindeer?) (Rav 1936c: 44-53, N 4-53) ♦ elk (Lob 2015: 99-135, N 54-135)

Carving G-XV-20 of the Cape Karetski site (description above). Photo: V. Poikalainen, 2001.

STRUCTURE OF INFORMATION IN THE CATALOGUE



Map of the Lake Onega rock art territory: V. Poikalainen, 2018.

The petroglyph territory stretches about 22 km along of the eastern shoreline of Lake Onega from Cape Swan at the mouth of the greatest Karelian river – Vodla – to the South, until Guri Islands. The whole territory can be divided into the Vodla and Besov Nos regions.

Representation of Graphic Material

The graphic material in this volume of the catalogue is presented against a multilayer grid structure which is connected to the GPS network[1]. All different levels of graphic material are tied together by the unified co-ordinate grid to enable the user to get a clear understanding of the spatial situation of different sites, groups and carvings. In the previous volume (Poikalainen, Ernits 1998), a similar grid was used, but it based on an independent coordinate system (N-co-ordinate descended in northward direction which was pointing at the magnetic North Pole). Harmonization of coordinates between the current and the previous volume will be carried out later and will be published in the next volume of the catalogue.

Maps of the territory, region and localities represent the higher levels within the catalogue. These are followed by plans of sites, which is the highest level where carving depictions are present. Petroglyph group plans that follow each site plan form the next layer. The lowest level contains the depictions of separate carvings presented after each group plan in the catalogue.

THE MAP OF THE PETROGLYPH TERRITORY (p. 17) at Lake Onega has been compiled from aerial stereo-photometric material and elements of other available maps. Its scale is 1:100 000, and it depicts both rock art regions of the territory: the Vodla region and the Besov Nos region (from Cape Karetski to the Guri Islands).

THE MAP OF THE BESOV NOS REGION (p. 21) has a scale of 1:50 000 and has been compiled from aerial stereo-photometric material and elements from other available maps. It includes the Karetski, Peri, Besov Nos, Kladovets, Gazhi and Guri localities.

THE CONTOUR MAP OF KARETSKI AND PERI (p. 22) has a scale of 1:10 000 and has been compiled from aerial stereo-photometric material. On the map, the positions of petroglyph sites and prehistoric settlements are shown.

There are two **CONTOUR MAPS OF THE LOCALITIES** (M 1:2 500), which have been compiled partly from aerial stereo-photometric material and partly based on conventional survey measurements:

1) Cape Karetski (p. 24),

2) Cape Peri (p. 166).

THE PLANS OF SITES include petroglyph panels and their close surroundings. They are mainly presented in the 1:200 (or 1:400) scale, but for minor sites smaller scales have also been used. The coastline and some other elements of the plans were estimated using the traditional survey equipment. The carvings and their surroundings have been documented using photometry (see Photometric Documentation). Partial plans of the larger sites having a scale 1:80 are represented on subsequent pages. In this book 8 sites are represented with 845 petroglyphs altogether. Each site on the maps has been labelled with a Roman capital letter (cf. TABLE 3).

The catalogue of the Vodla Region consisting of Cape Swan, Vodla and Golets localities has been published earlier (Poikalainen, Ernits 1998). Mikhailovets Island where a carving was discovered recently should topographically belong to the Vodla region.

PLANS OF CARVING GROUPS represent petroglyphs' layout within the group and some features of the bedrock micro-topography. Besides carvings, these plans (M 1:20 mainly) also

1 GPS coordinates 6890000N and 3969000E were chosen as the base point of the grid structure (cf. map of the territory on the previous page where the higher-rank coordinates (which remain unchanged) are given in brackets).

include fissures and broken or eroded edges of the bedrock. The grey shaded areas depict larger cracks, grooves or cavities in the rock. Carvings on plans are in orange colour. Those which were not recorded by our team but documented by other researchers have magenta outlines, are filled with purple colour and marked with a number referring to the author accordingly. For example, Lob 106 marks carving 106 published by N. Lobanova (Lobanova 2015).

The main criteria for the grouping of the carvings are proximity to neighbouring petroglyphs and the micro-topography of the rock surface within the sites. The total number of groups is 72 and within a site the groups are labelled with Roman numerals (cf. TABLE 3). If referred to, the group number is always associated with their site label. For example, H-II means the second group of the Moduzh site.

IMAGES OF SINGLE PETROGLYPHS are depicted as closed solid lines filled with orange (or purple) colour. Next to carvings' depictions, the parameters of orientation and inclination are indicated graphically: a scaled arrow points to the north and a smaller arrow nearby is to mark the direction of rock inclination. The number at the arrow point tells the magnitude of the inclination. Adjacent to these two arrows is a scale indicator which tells the scale factor (M1:1, M 1:2; M 1:4; M 1:8 etc.) of the carving depiction. All carvings have uniform lines without any graphical indication of the uncertainty of the edges. The uncertainty factor of the image outline is characterized by the parameter "P" (preservation) after the end of each verbal description of the carving on the opposite page.

THE LABELLING OF SITES, GROUPS AND PETROGLYPHS is presented by capital letters and Roman and Arabic numerals (TABLE 3). For example, K-XI-3 represents carving 3 in group XI of the Peri 3 site (cf. TABLE 4).

TABLE 3. Labelling of sites, groups and carvings.

Site	Group	Petroglyph
Capital letter	Roman numeral	Arabic numeral

Parametric and Verbal Representation of the Carvings

Parametric and verbal description of petroglyphs is given on pages facing single carving depictions, except the direction of the rock surface inclination and the orientation of the petroglyph. These two parameters are shown by arrows close to the scale marks next to carving depictions. Thus, verbal description, parametric information and graphic representation may be viewed at the same time. Every description page has a diminished plan of the carving group on top of it and the diminished shape of the carving precedes each description.

Parametric and verbal information on each carving is presented in the following sequence:

1) two-dimension co-ordinate (of N-S and E-W directions) in metres with decimal fraction. Graphically the co-ordinate grid is represented on site plans in metric units,

2) data about identification,

3) verbal description of the detailed structure,

4) references to carving identification and interpretation by other researchers,

5) largest measure (LS) of the petroglyph (in centimetres),

6) preservation (P) of the petroglyph (5 levels),

7) visibility (V) of the petroglyph (5 levels),

8) depth (D) of the petroglyph (6 levels),

9) inclination (I) of the rock surface in relation to the horizontal plane (in degrees),

10) height (H) from reference water level at the Northern Cape Swan site on 27 July 1993 (in centimetres).

GRAPHIC SYMBOLS AND PUNCTUATION MARKS in descriptions of carvings

▲ separates labels from carving descriptions

● separates parametric data and carving parts (within the description string)

■ separates carving descriptions from identification and interpretation by other researchers

♦ separates different identification and interpretation results by other researchers

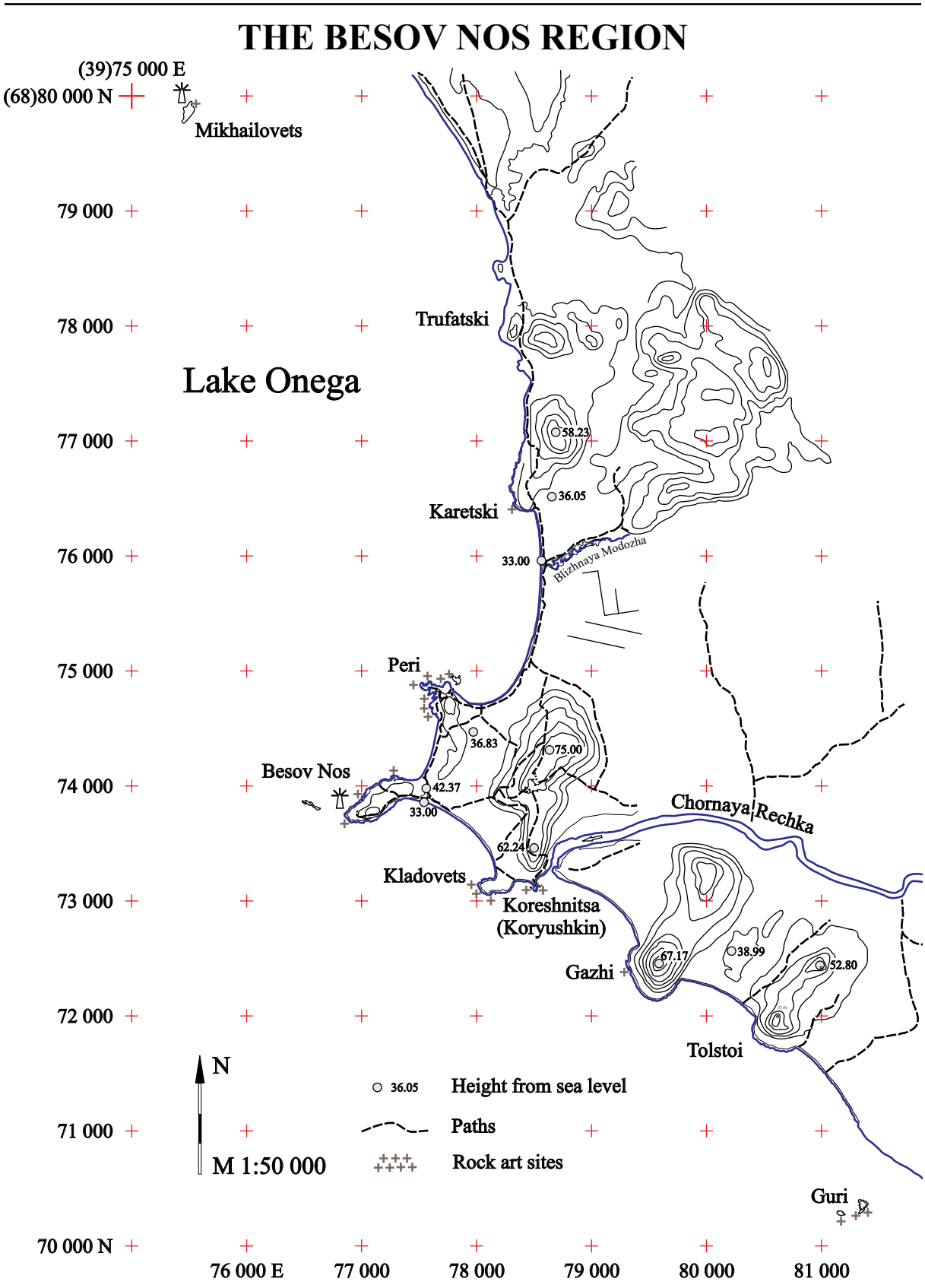
: (colon) indicates subordination of carving parts

; (semicolon) separates equivalent carving parts from one another

[ ] (brackets) includes data added by the authors of the catalogue

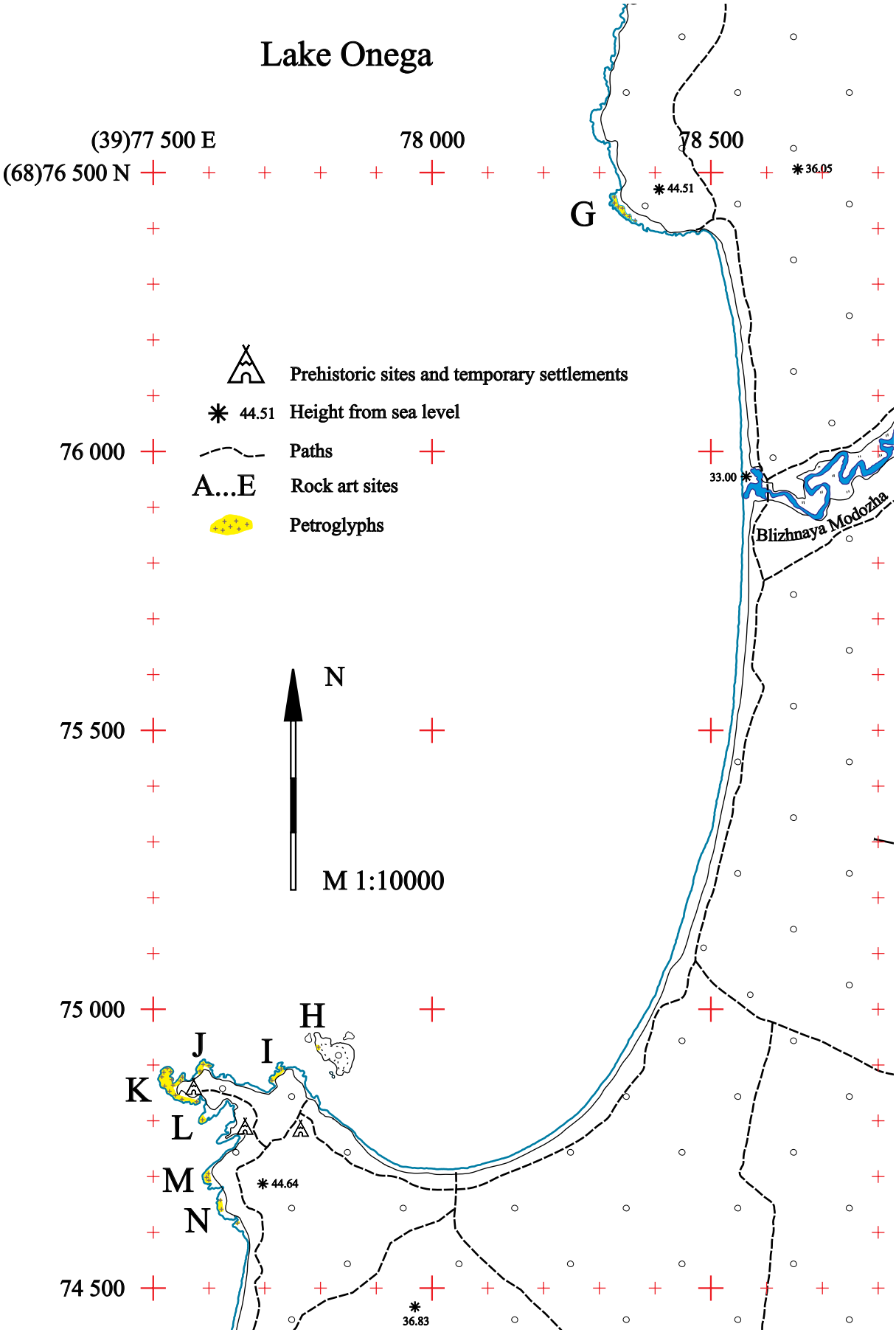
VERBAL DESCRIPTIONS OF THE LOCALITIES AND SITES precede the pages of group and carving representations. The description of a locality tells about the location of and access to the petroglyphs, gives an account of natural conditions and brief data about the prehistoric status. The description of a site includes, in addition to the general situation and conditions, also some statistics about the carvings.

Heliomorph (left) and a schematic anthropomorph (right) of group G-II at Cape Karetski site. Photo: V. Poikalainen, 2001.



Map of the Besov Nos region: V. Poikalainen, 2018.

The first petroglyphs of the Besov Nos Region were found in 1848. The region consists of Karetski, Peri, Besov Nos, Kladovets, Gazhi and Guri localities with 16 sites. Additional carvings at Karetski locality were discovered recently in 2010 (Lobanova 2015:231). The number of carvings at Karetski, Peri and Besov Nos localities is relatively high (150 and more).



Contour map of Karetski and Peri localities: V. Poikalainen, 2018.

KARETSKI AND PERI LOCALITIES

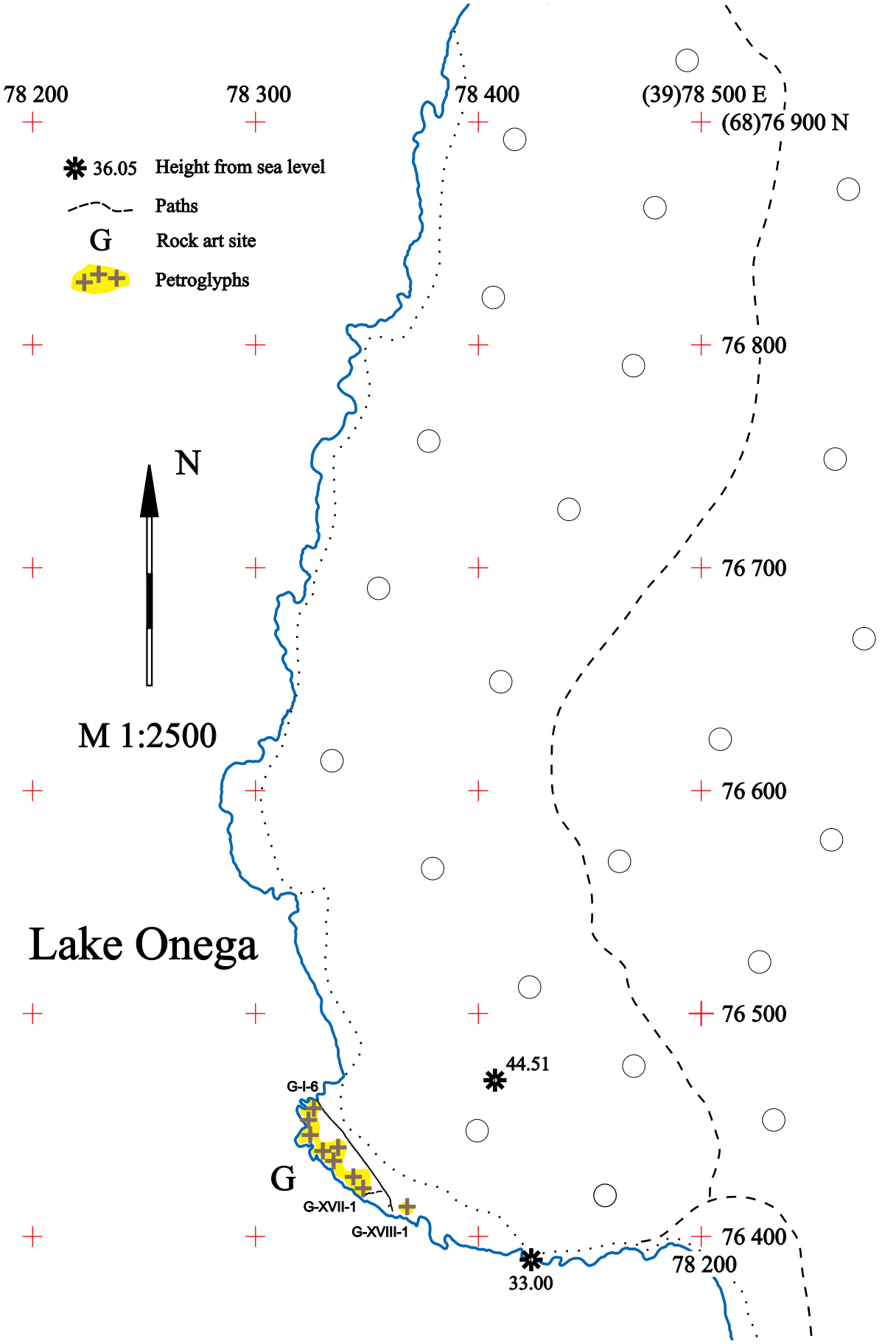
The current volume of the catalogue represents 8 carvings sites of Karetski and Peri Localities with 846 petroglyphs found there altogether (TABLE 4). This is more than a half of the total number of them in the territory. The number of carvings is the highest at Peri 3 with 372 petroglyphs, followed by Karetski with 235 petroglyphs and Peri 6 with 132 petroglyphs.

TABLE 4. List of sites and the number of groups and carvings within each site.

Site label	Site name	Number of groups	Number of carvings
G	Karetski	18	235
H	Moduzh	2	27
I	Peri 1	4	17
J	Peri 2	5	19
K	Peri 3	30	372
L	Peri 4	2	36
M	Peri 6	7	132
N	Peri 7	4	7
Sum		72	845

Rocks of these two localities are separated from each other by a 2 km long sandy beach. Closer to capes Karetski and Peri, sand forms about 2–3 meters high banks covered with pine forest along the shoreline. At the lowest part of the bank, a tiny creek called the Blizhnaya Modozha flows into the lake. There is an easy path connecting capes Karetski and Peri, which forks at about 2/3 way between the capes. It is possible to walk from here over the hill with remains of former Besov Nos village directly to the mouth of the Chornaya Rechka. Another branching closer to Cape Peri could be used for reaching the base of Cape Besov Nos. The existence of this path network makes it easy to move between the major sites of the Besov Nos region during fieldwork or excursions.

Beach between the localities of Karetski and Peri at the Blizhnaya Modozha creek. Photo: J. Ahokas, 2014.

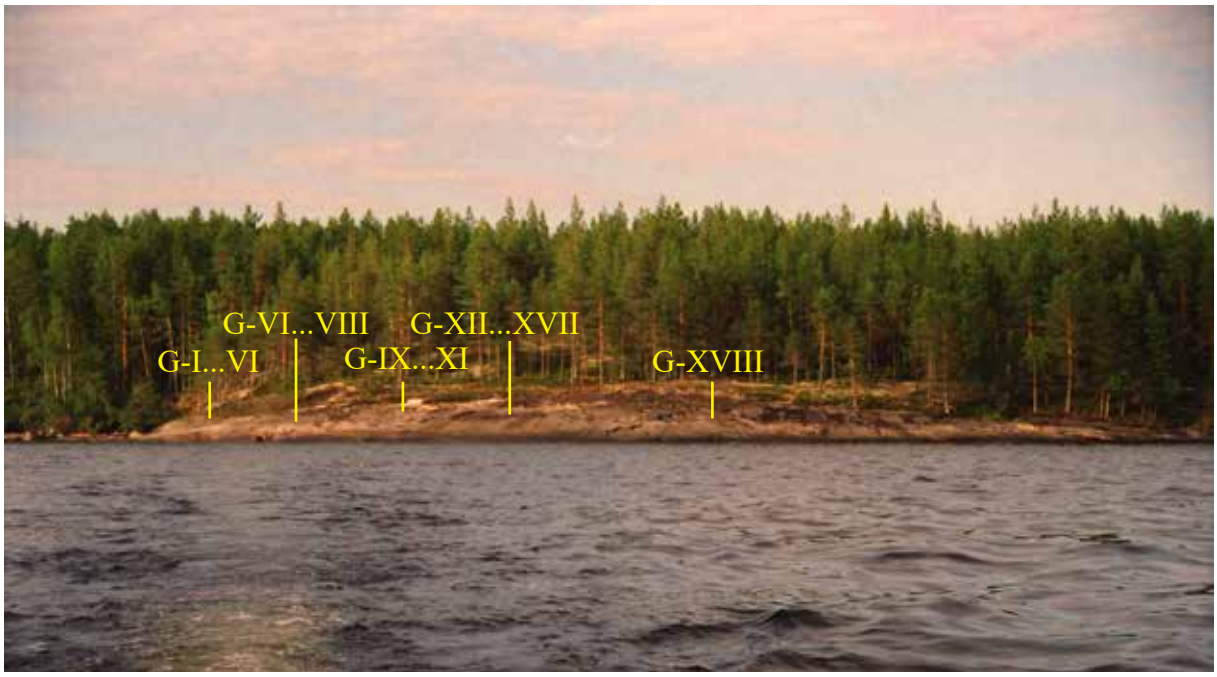


Contour map of the Karetski locality: V. Poikalainen, 2018.

THE KARETSKI LOCALITY

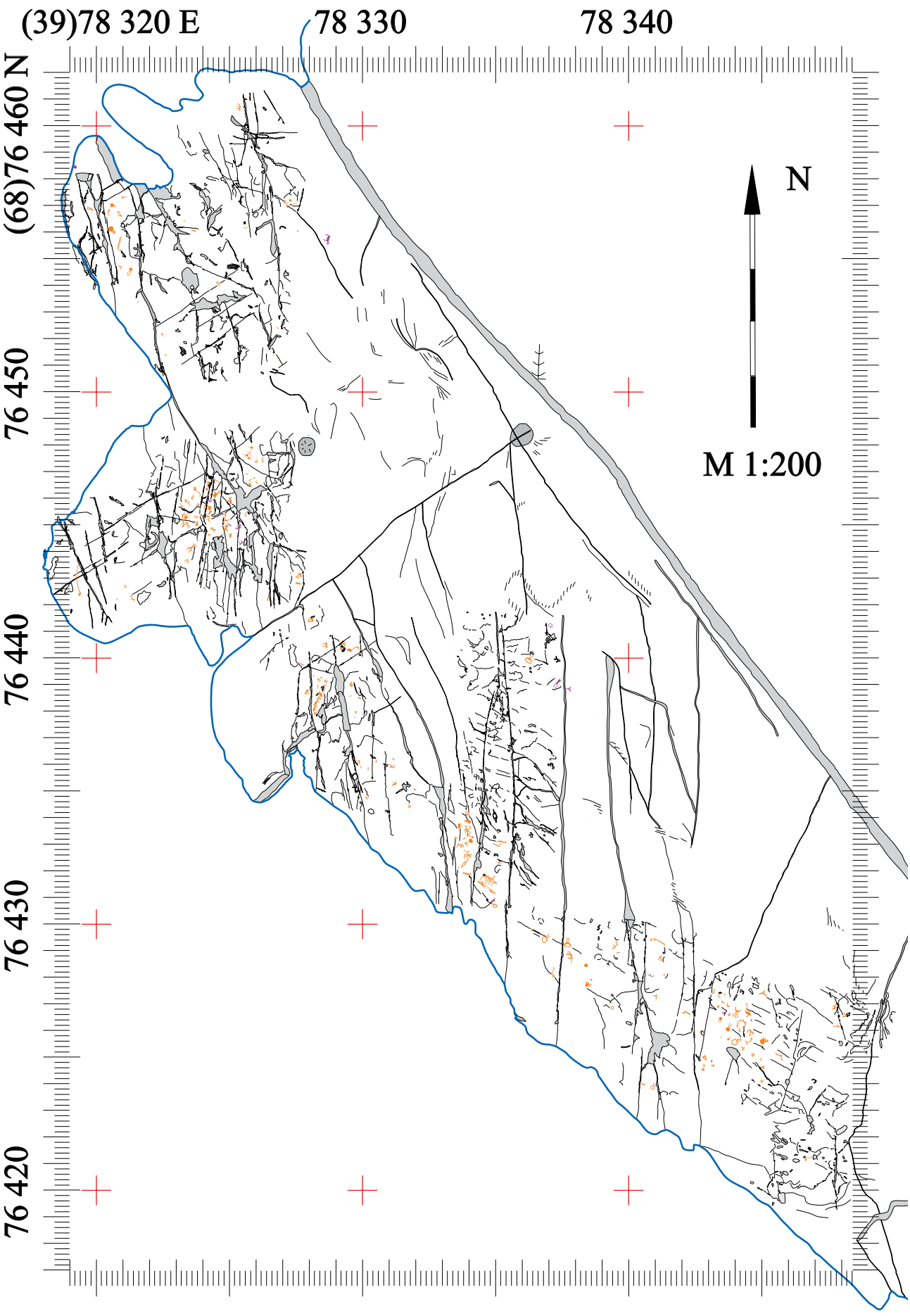
Karetski is the northernmost locality of the Besov Nos Region. Cape Karetski (formerly Karitski Nos and Karitskie Nosy) is located 9.5 km southeast of Bolshoi Golets Island. It can most easily be accessed by boat. There is also an about 15-kilometre long path to it from Shalski. Because of the difficult landscape at Cape Tshornyi and Klinovukha, it takes even experienced hikers 4–5 hours to reach Karetski. At about 2/3 of the distance from Shalski to Karetski, there is Mikhailovets Island on which also a carving has reportedly been found recently (Lobanova 2015: 70 ff). The name Karetski originates from the Vepsian word kar 'bay, inlet', which has also been borrowed into Russian in the form kara; the probable earlier toponym Karitskie Nosy is in the plural and means 'capes between inlets' (Ernits 2017: 266–267).

Cape Karetski is about 600 m wide at its base and extends some 150 m into the lake. Because of these proportions, it can hardly be distinguished against the shore when approached by boat. A good sign for location is the long sandy beach to the south of it. This ends at Cape Peri where densest collection of the Lake Onega carving sites has been found. A rocky cape northward of Karetski is called Trufatski with no finds of petroglyphs. Between these two capes, there is a 0.5 km long beach.



A view towards the southern part of Cape Karetski with carving groups. Photo: V. Poikalainen, 1998.

The rock surface between the water and the forest in the northern part of Cape Karetski is quite narrow. It is faced by a steep (4–7 m high) sandy shore with pine-wood on it. No petroglyphs have been found here so far. Petroglyph groups are situated on the southernmost part of the cape. At some distance higher of the rock surface, a Stone Age flint artefact was found in 1975 (Lobanova, Filatova 2015: 30). Still there are no other signs suggesting temporary or permanent settlements of the Neolithic Period despite the long history of archaeological research in the region.

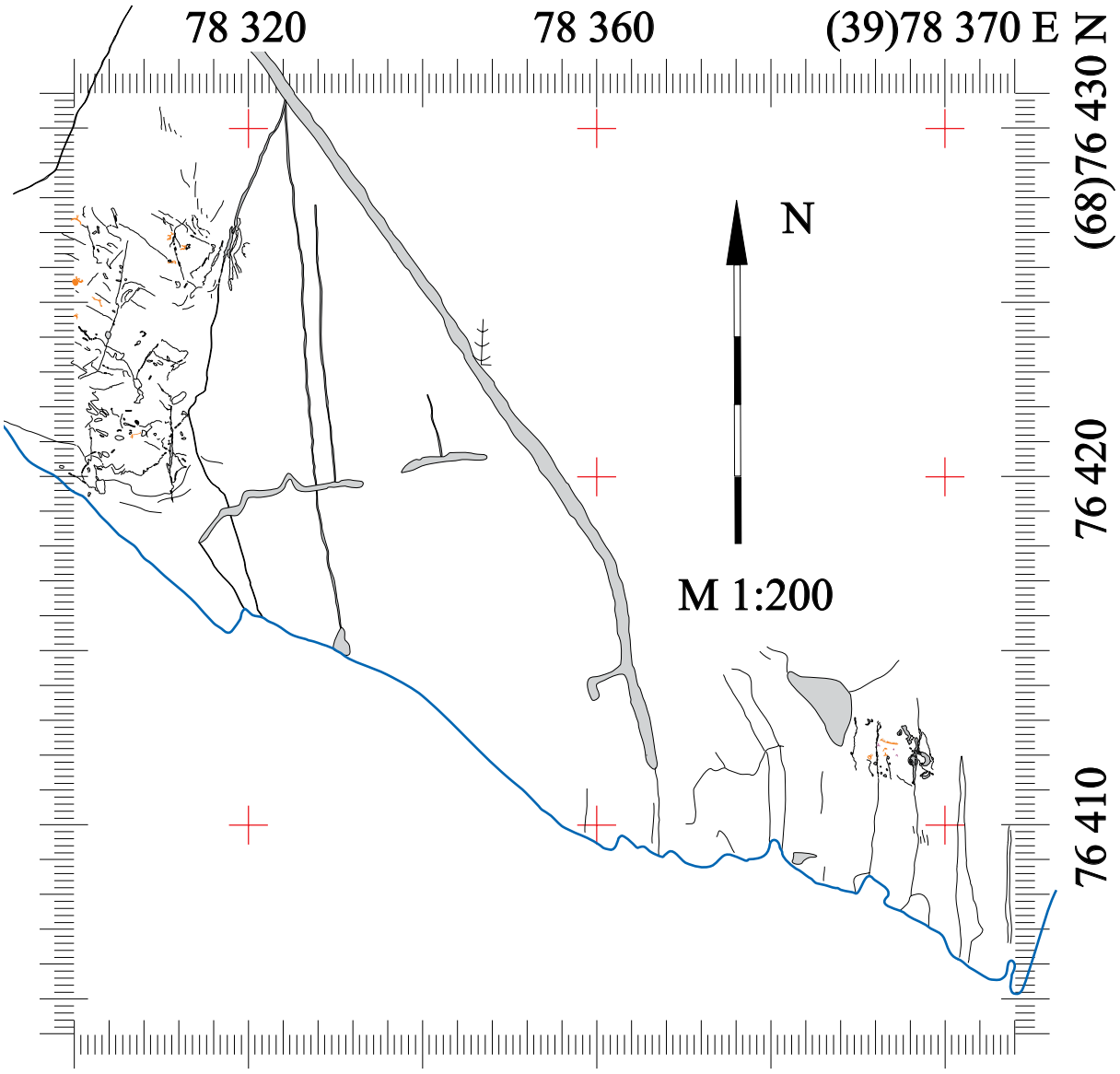

(39)78 320 E
78 330
78 340
(68)76 460 N
76 450
76 440
76 430
76 420
N
M 1:200

G: Karetski

Petroglyphs are located in the southern part of Cape Karetski on a 13–19-metre wide bare bedrock zone running 75 metres along the waterline. This zone is separated from the rest of the upper bedrock by an almost straight crevice starting from the shore cliff incision filled with water and is covered by soil along its run to the south. It serves as a landmark to start with location of carvings and carving groups. The higher part of the bedrock above the crevice has a thin layer of soil and some low vegetation.

The southern end of the crevice turns towards the water at a bigger rupture in the bedrock enclosing almost all carving groups into the area between it and water. Only the southernmost group (G-XVIII) with 7 carvings is situated beyond that crevice some 10 metres away behind the rupture. Altogether, there are 235 carvings in 18 groups known at Karetski by now.

Most of the petroglyphs have suffered from weathering, are poorly preserved and almost invisible to the untrained eye. Preservation and visibility of carvings are quite low almost everywhere throughout the site (TABLE 5). Only those close to the waterline at the northern end of the site can be seen easily. Here the rock face is reddish, and the waves prevent the growth of



lichens. Above the zone of wave action, the rock is grey and eroded in many places. This is the main reason why Cape Karetski carvings are badly visible during most of the day, even in favourable weather. Besides erosion, the biggest threat to petroglyphs are camp fires lit on rocks by visitors of the site.

A view along the soil-filled crevice and the surface of the carving site below it. Photo: V. Poikalainen, 2005.

Considerable weathering of the rock surface makes the documentation and closer examination of many carvings possible only for a short period around the sunset. Another option is to do it at night-time using oblique artificial lighting. Although most petroglyphs are shallow, the Karetski site has one of the deepest engraved images (G-XV-20) of the whole Besov Nos region. Although its groove is up to 4 mm deep, this carving is still poorly visible because of the grey and weathered surface of the rock.

TABLE 5. Mean parametric values[1] of the carvings at the Karetski site.

LS	P (1–5)	V (1–5)	D (1–6)	I (°)	H (cm)	RO	LO	IO
21 cm	2.8	2.0	2.7	8.6°	97.4 cm	27%	28%	45%

Poor preservation and visibility might to have been one reason why the catalogue of petroglyphs published by Ravdonikas lists only 55 separate images from Cape Karetski (Ravdonikas

1 Parametric values, histograms and other general data throughout this publication are based only on the data collected by the Estonian team.

1936a). The finds of Savvateyev's expedition between 1967 and 1979 added 83 figures to the list. This was followed by additional 74 carvings that were discovered during fieldwork conducted by the Estonian Society of Prehistoric Art in 1984–2002. 23 individual petroglyphs have also been found at Karetski later by the Karelian archaeologist Lobanova (Lobanova 2015: 70 ff). Currently, 235 carvings are known in total.

The petroglyphs at Karetski are relatively small (the mean of the largest measure is 21 cm); 80% of them measure less than 25 cm; 4% exceed 50 cm; the length of 16% is between 25–50 cm, and only one measures more than 1 m.

Remains left by fire at Cape Karetski next to petroglyph group G-X.
Photo: V. Poikalainen, 1998.

The panorama of carving motifs at Karetski is diverse compared to the sites of the Vodla Region. Some of the carvings have unique features, as a female figure with huge breasts in a dancing pose (G-IV-3), a compound carving of a male anthropomorph and a boat (G-XI-20), an elk-like depiction carrying an empty boat with an elk headed prow on the head instead of antlers (G-XI-4 and 5), a combination of a solar and a lunar symbol (G-XV-25), etc. Some of the carvings have depicted exaggerated body parts, such as an ornithomorph the neck of which exceeds about seven times the size of the trunk (G-VI-1) or a boat depiction with 20 dash-like "passengers" on board (G-II-8).

The Karetski site includes some informative palimpsests too. The most interesting of these is formed by a heliomorph (G-XI-24) superimposed by an elk-like carving (G-XI-23) superimposed by an ornithomorph (G-XI-25) which superimposes another ornithomorph (G-XI-26). Made at different times on a surface measuring approximately one square metre, this group offers information regarding to the relative dating of the petroglyphs.

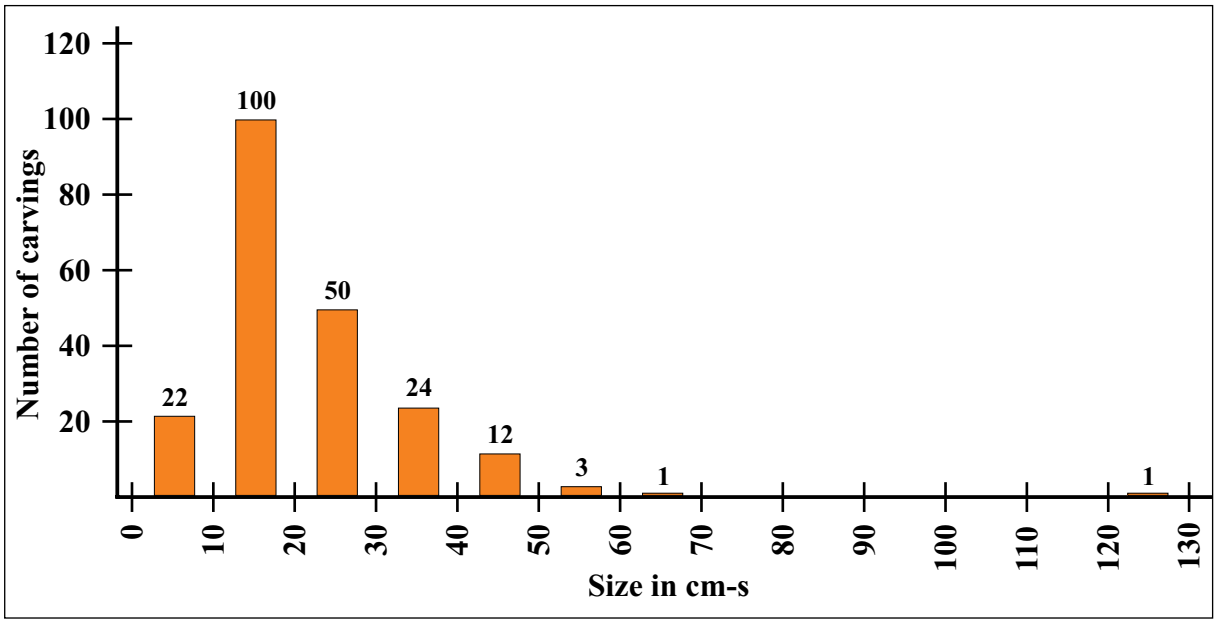
The distribution of general motif types at Cape Karetski is given in TABLE 6. Most abundant are ornithomorphic (including all different types of these) and astromorphic depictions (heliomorphs and selenomorphs), forming respectively 29% and 28% of the total number of carvings. The high proportion of astromorphs (in comparison to ornithomorphs) is an excep-

tional feature of the site. Only at Peri-6, the number of astromorphs exceeds the number of ornithomorphic petroglyphs. The next numerous motifs of carvings are elaphomorphs (deer- or elk-like) and other zoomorphic depictions (both nearly 10%), followed by anthropomorphs (6.4%) and scaphomorphs (5.5%). Approximately 11% of depictions are indefinite.

TABLE 6. Carving motifs of the Karetski site.

Motif type	IN	OR	AS	EL	OZ	AN	SC	Other
Number	25	67	64	23	23	13	13	20

The lowest group is situated almost at the water level in a band-like configuration on the reddish rock in the northern part of the site. Although the waves have worn the edges of the carvings round and smoothed the chiselled traces, these have the best visibility across the site.



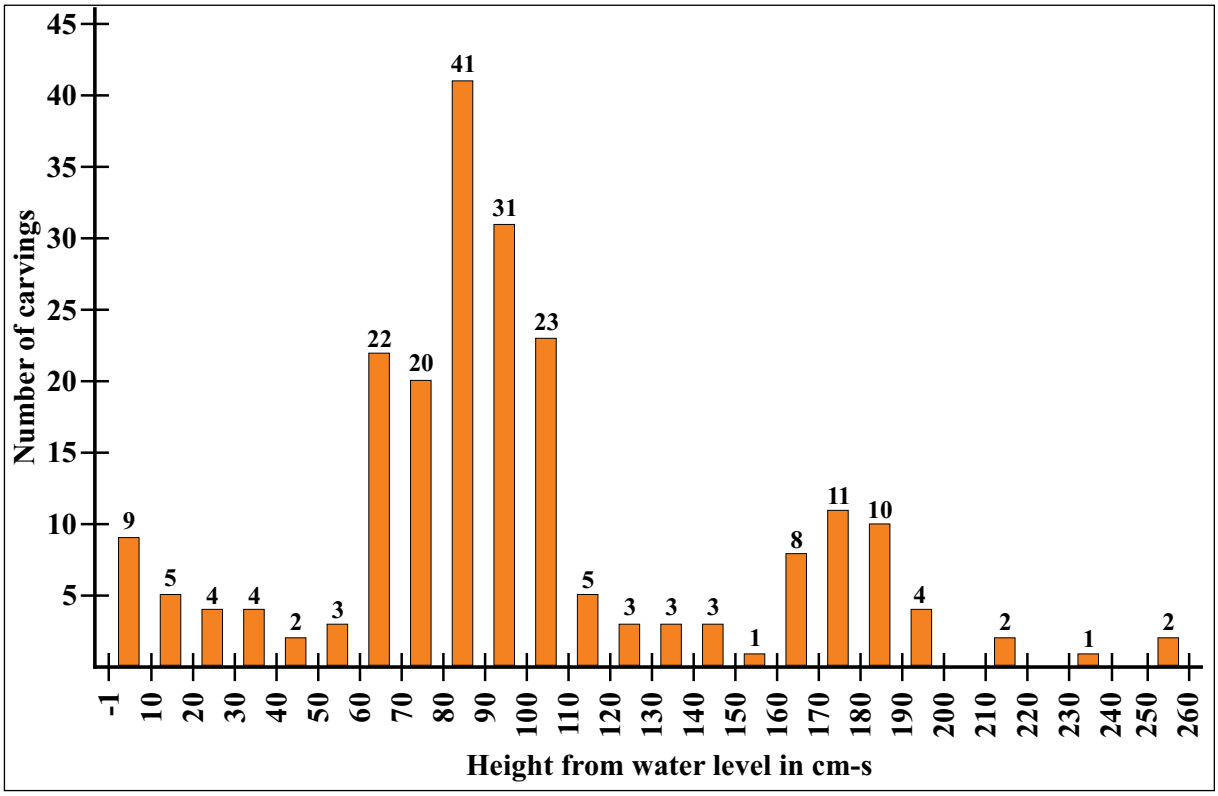
Distribution of carvings by size at the Karetski site. Histogram: V. Poikalainen, 2018.

The height of the carvings from the waterline ranges from -1 to +256 cm. Combined with the wide variety of different motifs (cf. TABLE 6), this fact supports the assumption that Cape Karetski has been used for carving of petroglyphs during a long period of time.

A large boat depiction of the lowest carving group G-II at the Karetski site. Photo: V. Poikalainen, 1999.

About 55% of the carvings are located 60–110 cm above the present-day water level. 11% of them are situated at heights from -1 to 59 cm, 6% between 110 and 159 cm, 14% between 160–199 cm and only 2% between 210 and 259 cm.

At higher elevation, even well-preserved carvings on smooth grey bedrock are poorly visible. A remarkable group of petroglyphs there (G-XV) is situated on badly weathered bedrock quite high (1.6–2.0 m) above the water level. Various types of astromorphic symbols dominate



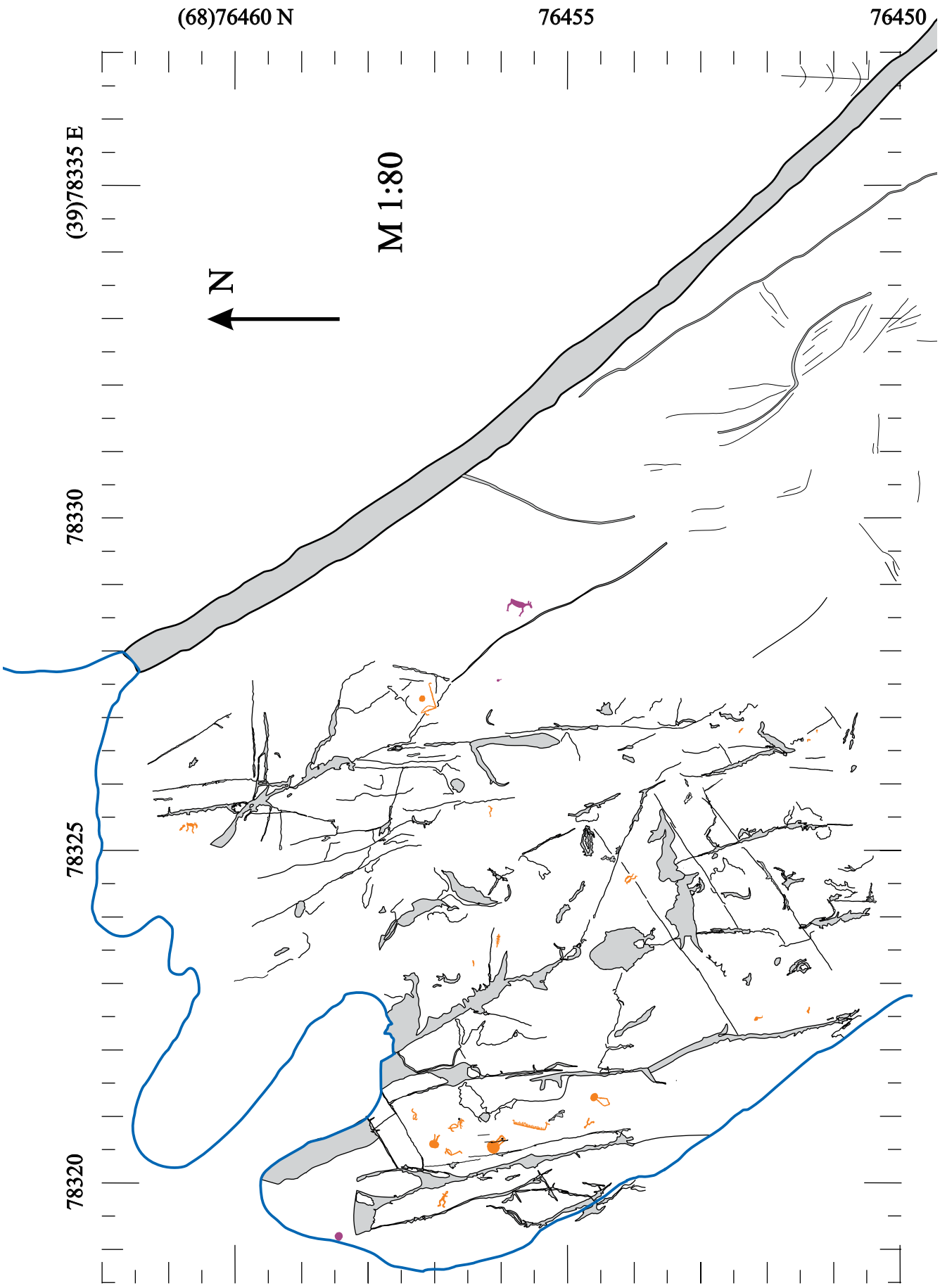
Distribution the height of carvings from water level at Karetski.
Histogram: V. Poikalainen, 2018

A selenomorphic depiction (G-XV-8) in the second largest group of carvings.
Photo: V. Poikalainen, 2001.

in this group. The largest group (G-V) of the site is even more badly eroded and covered with fissures. It consists of very different types of petroglyphs forming a tight structure 0.6–1.1 m above water level.

The southernmost petroglyphs (G-XVIII) are located some 25 m away of the second largest group (G-XV) behind a rupture, from which a great deal of rock surface has been fallen apart.

The lowest carving of Karetski – a human-like depiction (G-II-1) – is worn but still quite well visible against the reddish rock surface. Photo: V. Poikalainen, 1999.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(39)78335 E
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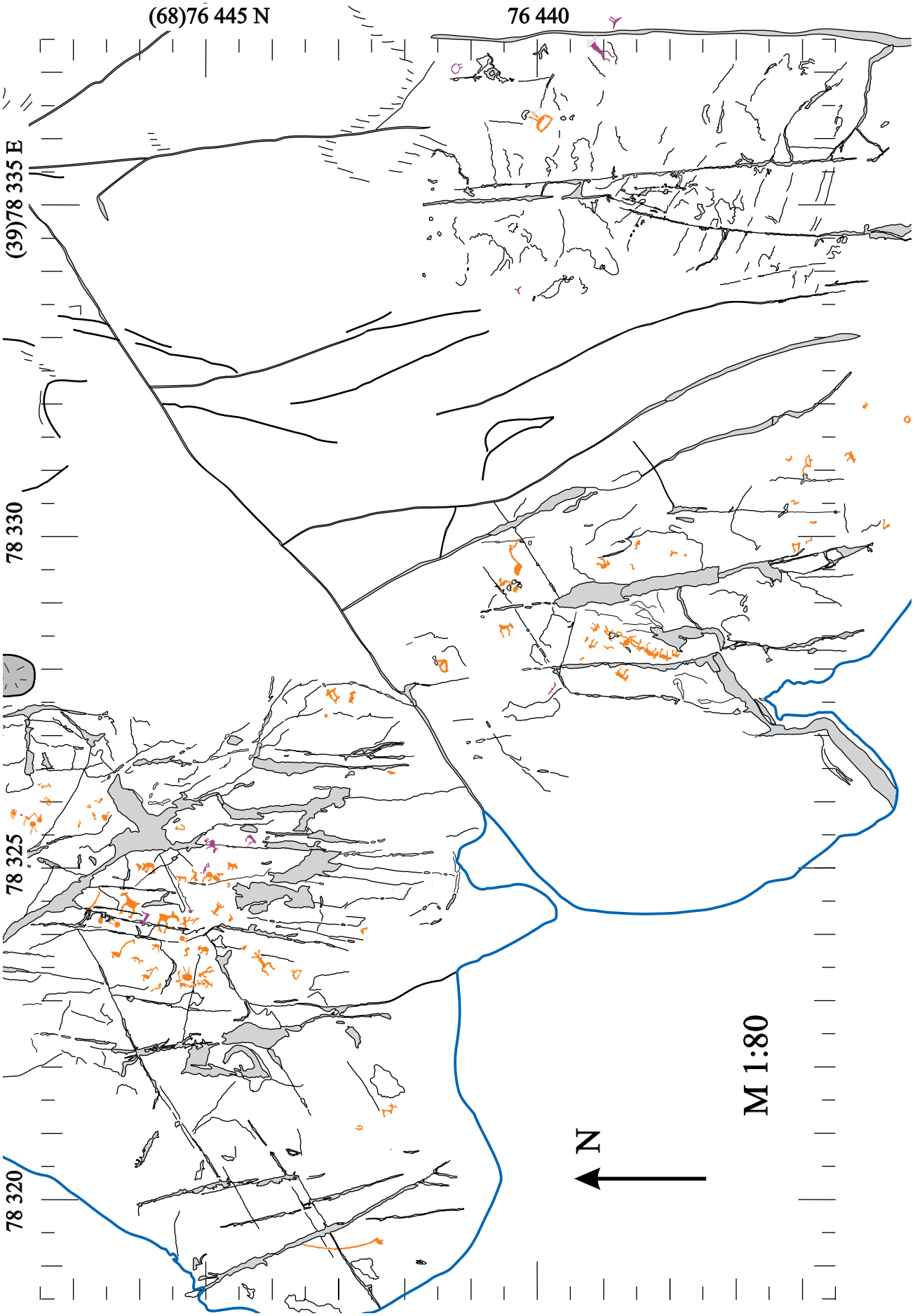
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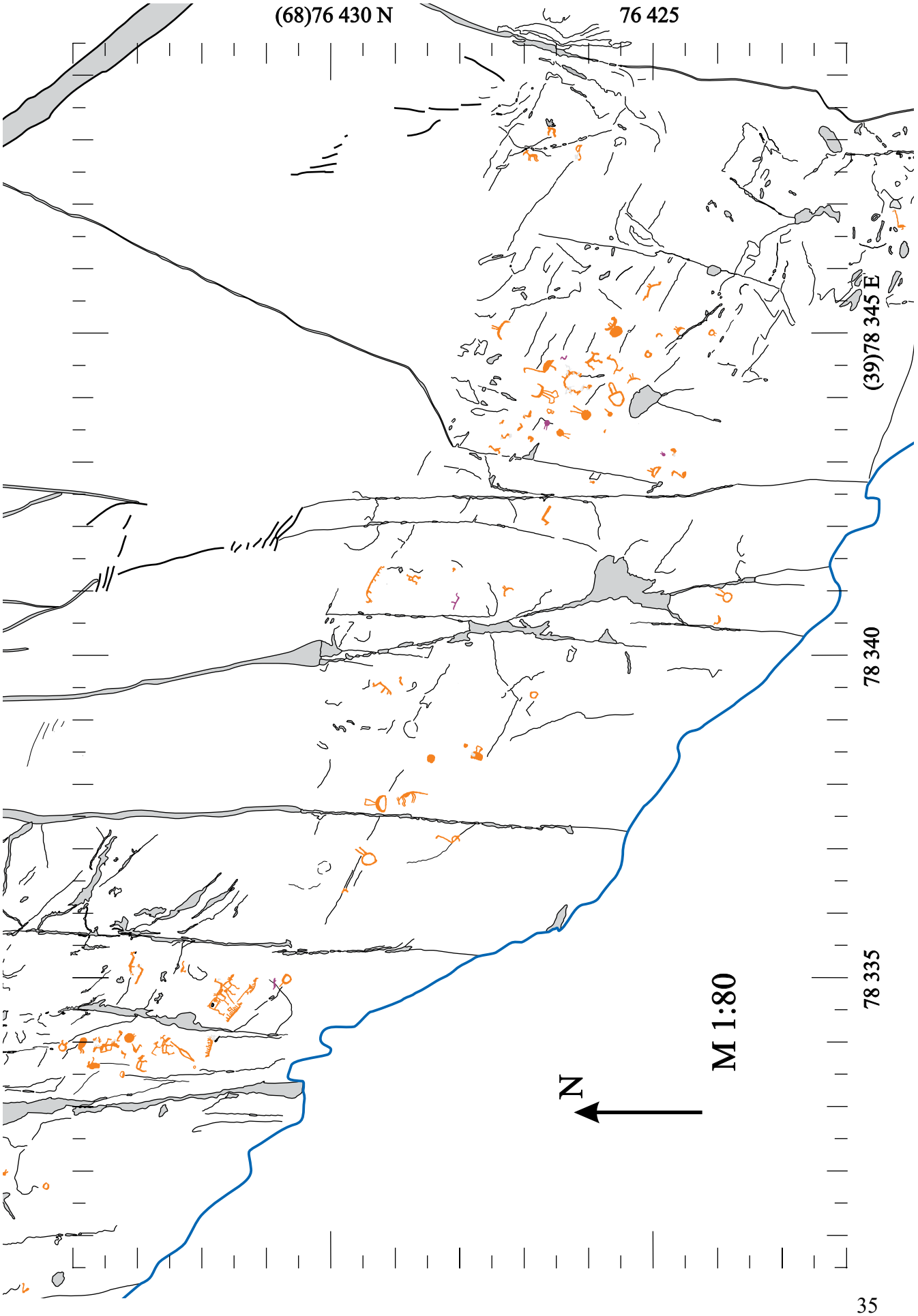
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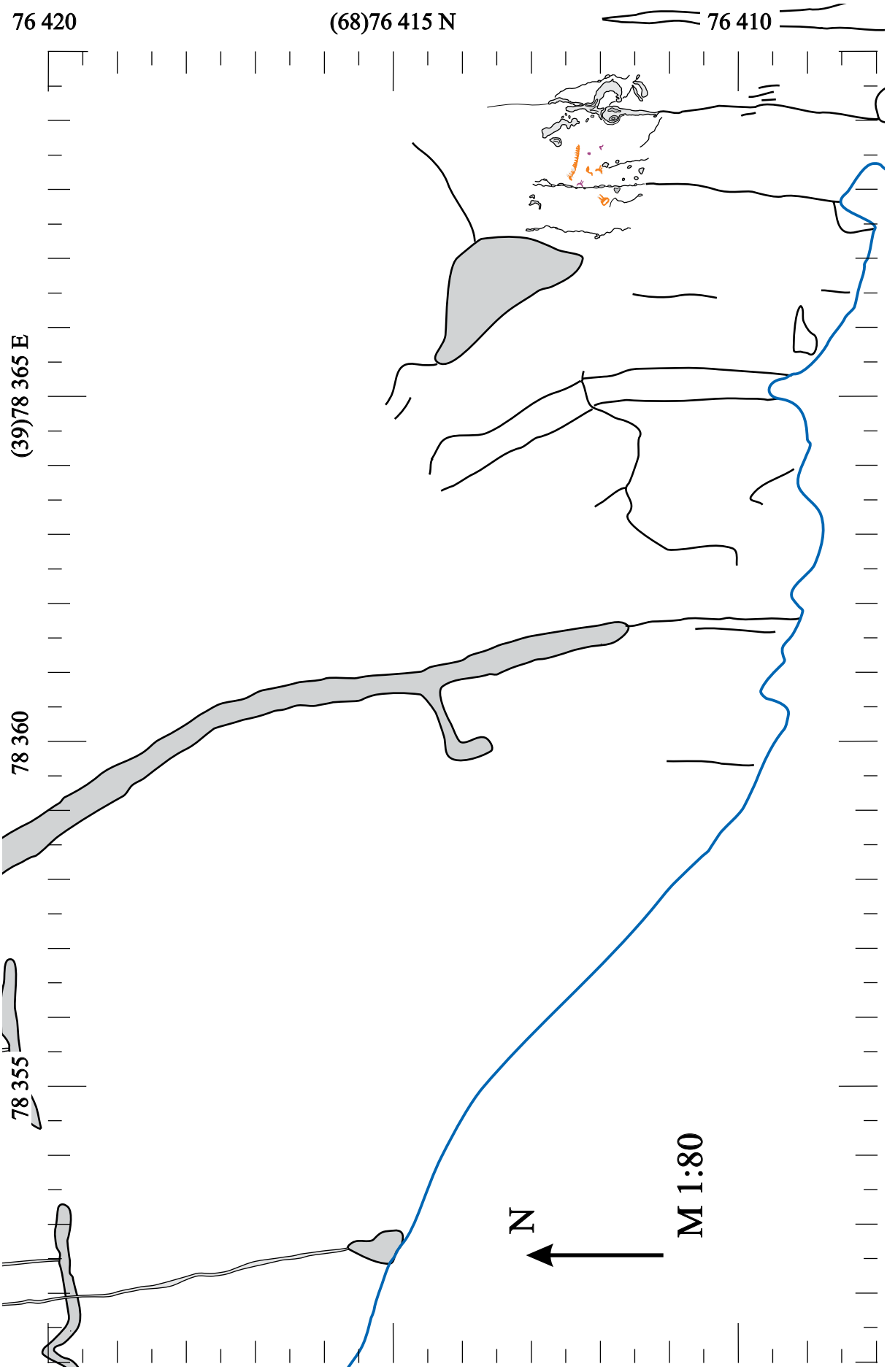
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78 355
N
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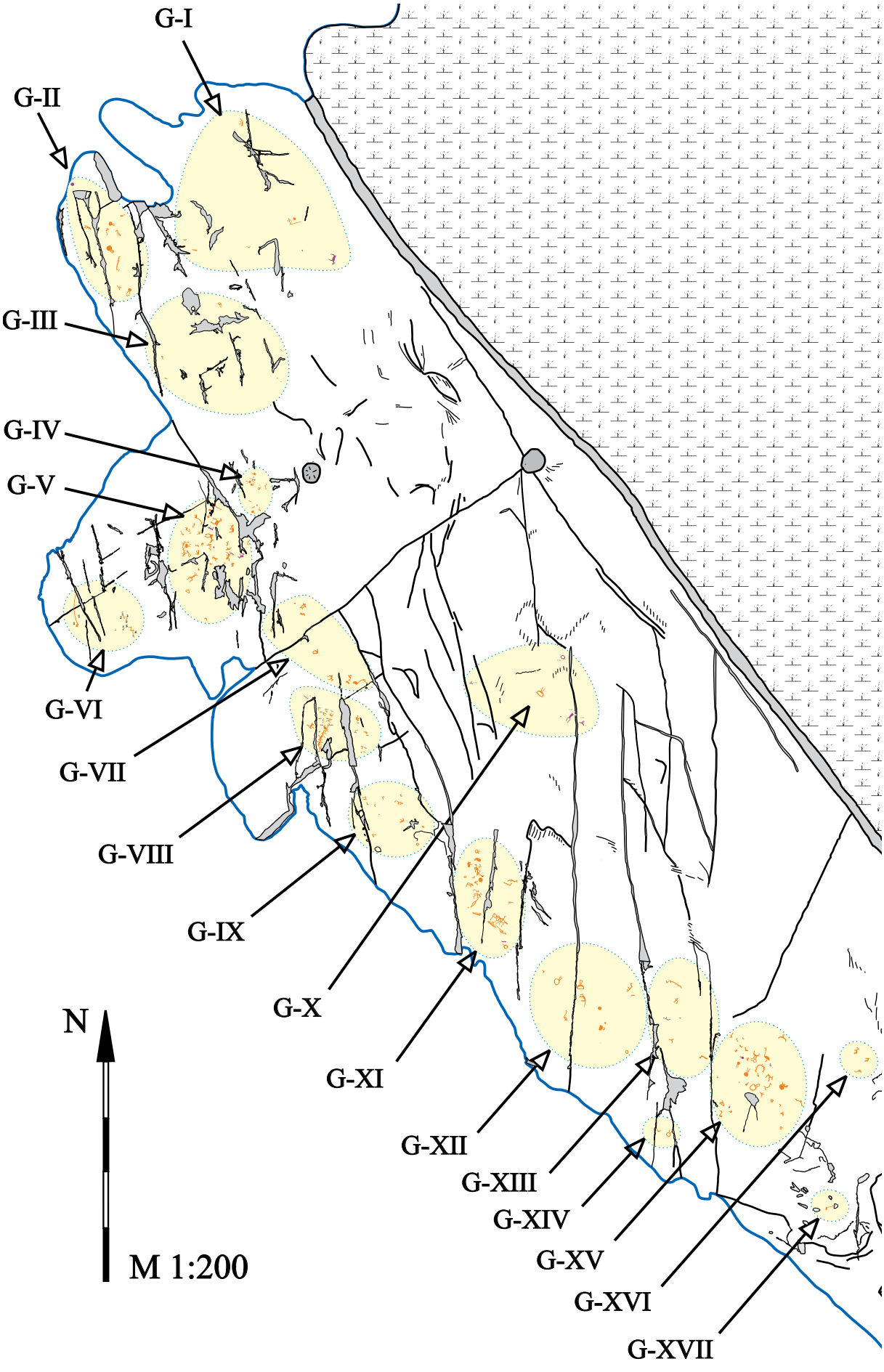
G-I
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G-IV
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G-VII
G-VIII
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G-XV
G-XVI
G-XVII
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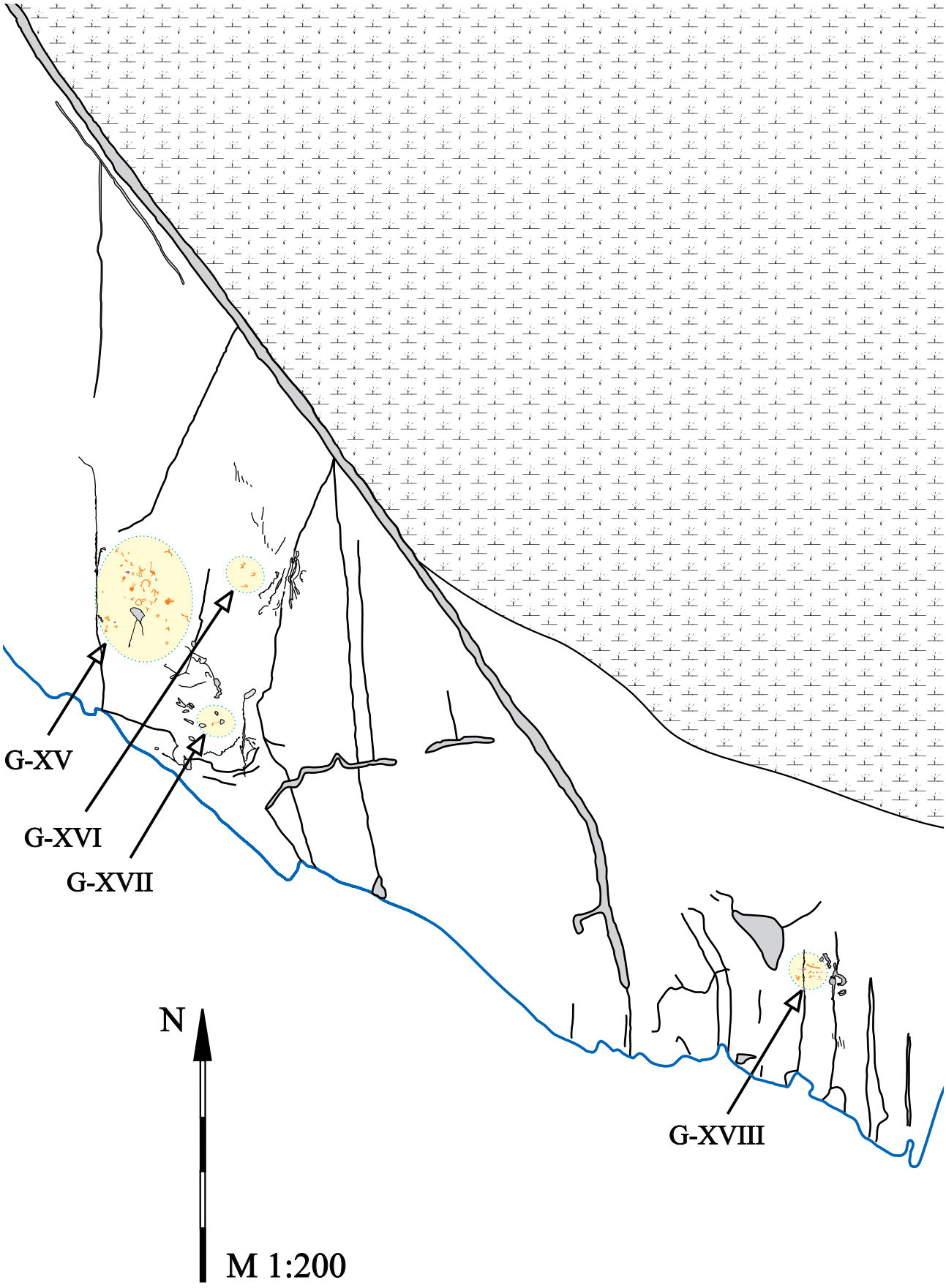
M 1:200


G-XV
G-XVI
G-XVII
G-XVIII
N
M 1:200

Without tracing, even well known carvings of Karetski are hardly seen by untrained eye. Photo: V. Poikalainen, 1999.

As location aid of carvings at Karetski in situ, published material should be used. Photo: V. Poikalainen, 1999.