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Sprawozdanie z badań archeobotanicznych przeprowadzonych na stanowisku 4 w miejscowości Kałdus, gm. Chełmno. Katalog zaobserwowanych fitoliów

Archaeobotanical report from site 4 in Kałdus, Chełmno commune. A catalogue of phytoliths

Wstęp

Materiał do badań mikroskopowych szczątków roślinnych został pobrany w sierpniu 2025 roku ze stanowiska numer 4 zlokalizowanego w miejscowości Kałdus, gm. Chełmno, woj. kujawsko – pomorskie. Próby ziemi, o objętości do 40 ml, pochodzą z obiektów archeologicznych o zróżnicowanej funkcji, które na podstawie znalezionego materiału archeologicznego, zostały przypisane do dwóch horyzontów chronologicznych: kultury pucharów lejkowatych (KPL) oraz kultury łużyckiej (KŁ).

Introduction

Material for microscopic examination of plant remains was collected in August 2025 from site number 4 located in Kałdus, Chełmno commune, Kuyavian-Pomeranian Voivodship. Soil samples, with volumes up to 40 ml, come from archaeological features with diverse functions, which, based on the archaeological material found, were assigned to two chronological horizons: the Funnelbeaker Culture and Lusatian Culture.

Materiały i metody

Analizie mikroskopowych szczątków roślinnych poddano 111 prób (Tabela 1). Metodologia zastosowana do ekstrakcji fitolitów jest zgodna z protokołem zaproponowanym przez Katza i in. (2010), w którym próbkę osadu o masie od 24 do 40 mg traktuje się 50 µl roztworu kwasu solnego (6N HCl) w celu usunięcia węglanów. Mieszaninę rozprasza się za pomocą wytrząsarki laboratoryjnej a następnie, po zakończeniu reakcji, dodaje się 450 µl poliwolframianu sodu (SPT) [Na6(H2W12O40)·H2O] o gęstości 2,4 g/ml. W kolejnym kroku próbki są umieszczone w myjce ultradźwiękowej przez 5–10 minut, a następnie wirowane przez 5 minut z prędkością 5000 obrotów/minutę w wirówce laboratoryjnej. Proces ten oddziela pozostałe składniki mineralne (głównie kwarc, gliny i fitolity) według gęstości. Podczas gdy fitolity i inne lżejsze materiały unoszą się w roztworze, cięższe materiały, takie jak kwarc, osiadają na dnie. Lżejszą frakcję zawierającą fitolity przeniesiono do mikroprobówki o pojemności 0,5 ml i zawirowano. Do badania mikroskopowego przygotowano preparat, rozprowadzając 50 µl wodnego roztworu materiału i przykrywając go szkiełkiem nakrywkowym o wymiarach 24 x 24 mm.

Obserwację mikroskopową próbek przeprowadzono za pomocą mikroskopu Olympus BX41, a zdjęcia cyfrowe wykonano kamerą Olympus DP74. W celu identyfikacji morfologicznej przeanalizowano co najmniej 200 fitolitów o rozpoznawalnej morfologii, korzystając z co najmniej 100 losowo wybranych pól widzenia przy powiększeniu 400–600x. Identyfikację fitolitów sprawdzono w oparciu o zbiory referencyjne Uniwersytetu Autonomicznego w Barcelonie, bazę danych PhytCore (https://www.phytcore.org) oraz literaturę specjalistyczną (np. Twiss i in., 1969; Brown, 1984; Rosen, 1992; Mulholland i Rapp, 1992; Piperno, 2006). Opis morfologiczny fitolitów jest zgodny z nową terminologią ustanowioną przez Międzynarodowy Komitet Nomenklatury Fitolitów (ICPN 2.0; Neumann i in., 2019).

W tabelach katalogowych wymieniono tylko wybrane zidentyfikowane fitolity (WM w tabeli oznacza zniszczony morfotyp) natomiast w części fotograficznej ukazano te okazy, które cechowały się najlepiej zachowanymi cechami diagnostycznymi

Materials and methods

In total, 111 samples were analysed (Table 1). The methodology used for the extraction of phytoliths follows the extraction protocol proposed by Katz et al. (2010), in which a sediment sample of between 24 and 40 mg is treated with 50 µl of a hydrochloric acid solution (6N HCl) to remove carbonates. The mixture is dispersed using a vortex mixer, and, once the reaction ceases, 450 µl of sodium polytungstate (SPT) [$Na_6(H_2W_{12}O_{40})\cdot H_2O$] with a density of 2,4 g/ml is added. Next, an ultrasonic scaler is used for 5-10 minutes, and later a laboratory centrifuge is used for 5 minutes at 5000 rpm. This process separates the remaining mineral components (mainly quartz, clays, and phytoliths) by density. While phytoliths and other lighter materials float in solution, heavier materials like quartz settle to the bottom. The lighter fraction containing the phytoliths is transferred to a 0,5 ml microtube and vortexed. For microscopic examination, a slide is prepared by spreading 50 µl of an aqueous solution of the material onto a slide and covering it with a 24 x 24 mm coverslip.

Microscopic observation of the samples was performed using an Olympus BX41 microscope, and digital photographs were taken with an Olympus DP74 camera. For morphological identification, a minimum of 200 phytoliths with recognizable morphology were analysed from a minimum of 100 randomly selected fields of view at 400-600x magnification. Phytolith identification was checked against Autonomous University of Barcelona reference collections, the PhytCore database (https://www.phytcore.org), and specialized literature (e.g., Twiss et al., 1969; Brown, 1984; Rosen, 1992; Mulholland and Rapp, 1992; Piperno, 2006). The morphological description of the phytoliths follows the new terminology established by the International Committee for Phytolith Nomenclature (ICPN 2.0; Neumann et al., 2019).

The catalogue tables list present only chosen identified phytoliths (WM in the tables stands for “worn morphotype”), whereas in the photographic section, only the best-preserved diagnostic specimens were selected.

Bibliografia/References

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Tab. 1 Informacje na temat prób pobranych ze stanowiska 4 w miejscowości Kałdus.
Samples from the site 4 in Kałdus.

Lp./No	Nr inw. Polowy/Field inventory	Obiekt/ Feature	Profil/Cross section	Warstwa/Layer	Data pobrania/Date	Waga/Weight [mg]
1	Ka4_2025_1_a	1	W	I	06.08.2025	49,67
2	Ka4_2025_1_b	1	W	I	06.08.2025	34,87
3	Ka4_2025_1_b	1	W	I	06.08.2025	31,79
4	Ka4_2025_1_d	1	W	I	06.08.2025	36,31
5	Ka4_2025_1_e	1	W	I	06.08.2025	35,66
6	Ka4_2025_1_f	1	W	I	06.08.2025	37,34
7	Ka4_2025_1_g	1	W	II	06.08.2025	34,64
8	Ka4_2025_1_h	1	W	II	06.08.2025	35,51
9	Ka4_2025_1_i	1	W	II	06.08.2025	32,62
10	Ka4_2025_1_j	1	W	II	06.08.2025	36,81
11	Ka4_2025_1_k	1	W	II	06.08.2025	29,18
12	Ka4_2025_1_l	1	W	II	06.08.2025	37,5
13	Ka4_2025_1_m	1	W	II	06.08.2025	36,45
14	Ka4_2025_1_n	1	W	II	06.08.2025	34,62
15	Ka4_2025_1_o	1	W	II	06.08.2025	32,49
16	Ka4_2025_3_1	3	SE	I	06.08.2025	32,23
17	Ka4_2025_3_2	3	SE	I	06.08.2025	31,36
18	Ka4_2025_3_3	3	SE	I	06.08.2025	36,65
19	Ka4_2025_3_4	3	SE	I	06.08.2025	36,9
20	Ka4_2025_3_5	3	SE	I	06.08.2025	36,29
21	Ka4_2025_3_6	3	SE	I	06.08.2025	34,13
22	Ka4_2025_3_7	3	SE	II	06.08.2025	32,65
23	Ka4_2025_3_8	3	SE	II	06.08.2025	32,24
24	Ka4_2025_3_9	3	SE	II	06.08.2025	34,89
25	Ka4_2025_3_10	3	SE	I	06.08.2025	32,05
26	Ka4_2025_24_1	24		I	06.08.2025	31,41
27	Ka4_2025_24_2	24		I	06.08.2025	35,78
28	Ka4_2025_24_3	24		I	06.08.2025	37,9
29	Ka4_2025_24_4	24		I	06.08.2025	30,44
30	Ka4_2025_24_5	24		II	06.08.2025	30,83
31	Ka4_2025_24_6	24		II	06.08.2025	36,21
32	Ka4_2025_24_7	24		II	06.08.2025	31,88
33	Ka4_2025_24_8	24		II	06.08.2025	30,92
34	Ka4_2025_24_9	24		II	06.08.2025	32,52
35	Ka4_2025_24_10	24		II	06.08.2025	37,57
36	Ka4_2025_24_11	24		III	06.08.2025	32,56
37	Ka4_2025_24_12	24		III	06.08.2025	32,32
38	Ka4_2025_24_13	24		III	06.08.2025	32,31
39	Ka4_2025_24_14	24		III	06.08.2025	31,16
40	Ka4_2025_24_15	24		III	06.08.2025	35,15
41	Ka4_2025_24_16	24		III	06.08.2025	32,74
42	Ka4_2025_24_17	24		III	06.08.2025	33,56
43	Ka4_2025_24_18	24		III	06.08.2025	36,38
44	Ka4_2025_24_19	24		III	06.08.2025	37,12
45	Ka4_2025_24_20	24		III	06.08.2025	33,72
46	Ka4_25_1	25	NW	IV	08.08.2025	34,65
47	Ka4_25_2	25	NW	IV	08.08.2025	34,72
48	Ka4_25_3	25	NW	IV	08.08.2025	32,53
49	Ka4_25_4	25	NW	IV	08.08.2025	32,49
50	Ka4_25_5	25	NW	IV	08.08.2025	34,12
51	Ka4_25_6	25	NW	IV	08.08.2025	31,16
52	Ka4_25_7	25	NW	IV	08.08.2025	31,06
53	Ka4_25_8	25	NW	IV	08.08.2025	30,26
54	Ka4_25_9	25	NW	IV	08.08.2025	29,5
55	Ka4_25_10	25	NW	IV	08.08.2025	31,49
56	Ka4_25_11	25	NW	II	08.08.2025	29,52

57	Ka4_25_12	25	NW	II	08.08.2025	31,2
58	Ka4_25_13	25	NW	II	08.08.2025	33,1
59	Ka4_25_14	25	NW	II	08.08.2025	33,02
60	Ka4_25_15	25	NW	II	08.08.2025	31,38
61	Ka4_25_16	25	NW	II	08.08.2025	29,79
62	Ka4_25_17	25	NW	III	08.08.2025	29,46
63	Ka4_25_18	25	NW	III	08.08.2025	29,39
64	Ka4_25_19	25	NW	III	08.08.2025	32,82
65	Ka4_25_20	25	NW	III	08.08.2025	29,06
66	Ka4_25_21	25	NW	I	08.08.2025	28,06
67	Ka4_25_22	25	NW	I	08.08.2025	31,31
68	Ka4_25_23	25	NW	I	08.08.2025	32,9
69	Ka4_25_24	25	NW	I	08.08.2025	32,42
70	Ka4_25_25	25	NW	I	08.08.2025	32,08
71	Ka4_25_26	25	NW	I	08.08.2025	36,37
72	Ka4_25_27	25	NW	I	08.08.2025	28,16
73	Ka4_25_28	25	NW	I	08.08.2025	28,04
74	Ka4_25_29	25	NW	I	08.08.2025	32,22
75	Ka4_25_30	25	NW	I	08.08.2025	28,08
76	Ka4_27_31	27	NW	I	08.08.2025	28,51
77	Ka4_2025_30_1	30	N	I	08.08.2025	31,84
78	Ka4_2025_30_2	30	N	I	08.08.2025	30,48
79	Ka4_2025_30_3	30	N	I	08.08.2025	31,53
80	Ka4_2025_30_4	30	N	I	08.08.2025	32,44
81	Ka4_2025_30_5	30	N	I	08.08.2025	33,2
82	Ka4_2025_30_6	30	N	I	08.08.2025	32,42
83	Ka4_2025_30_7	30	N	I	08.08.2025	33,24
84	Ka4_2025_30_8	30	N	I	08.08.2025	30,72
85	Ka4_2025_30_9	30	N	I	08.08.2025	29,13
86	Ka4_2025_30_10	30	N	I	08.08.2025	30,76
87	Ka4_2025_30_11	30	N	I	08.08.2025	33,3
88	Ka4_2025_30_12	30	N	I	08.08.2025	32,91
89	Ka4_2025_30_13	30	N	I	08.08.2025	33,64
90	Ka4_2025_30_14	30	N	I	08.08.2025	33,06
91	Ka4_38_1	38		I	08.08.2025	32,21
92	Ka4_38_2	38		I	08.08.2025	32,04
93	Ka4_38_3	38		I	08.08.2025	34,57
94	Ka4_38_4	38		II	08.08.2025	31,85
95	Ka4_38_5	38		II	08.08.2025	33,84
96	Ka4_38_6	38		II	08.08.2025	32,27
97	Ka4_38_7	38		II	08.08.2025	36,7
98	Ka4_38_8	38		II	08.08.2025	35,61
99	Ka4_38_9	38		II	08.08.2025	31,92
100	Ka4_38_10	38		II	08.08.2025	33,33
101	Ka4_38_11	38		II	08.08.2025	32,57
102	Ka4_W_1	W		III	08.08.2025	35,16
103	Ka4_W_2	W		III	08.08.2025	32,08
104	Ka4_W_3	W		III	08.08.2025	35,1
105	Ka4_W_4	W		III	08.08.2025	32,28
106	Ka4_W_5	W		III	08.08.2025	31,37
107	Ka4_W_6	W		III	08.08.2025	34,39
108	Ka4_W_7	W		III	08.08.2025	32,85
109	Ka4_W_8	W		IV	08.08.2025	30,23
110	Ka4_W_9	W		III	08.08.2025	33,71
111	Ka4_W_10	W		IV	08.08.2025	33,58

OBIEKT/FEATURE 1

Ka4_2025_1a

Sample no	Identifications
Ka4_2025_1a_1	Elongate entire
Ka4_2025_1a_1	WM
Ka4_2025_1a_1	WM
Ka4_2025_1a_1	WM
Ka4_2025_1a_1	Blocky
Ka4_2025_1a_2	Elongate entire
Ka4_2025_1a_2	Crenate
Ka4_2025_1a_2	WM
Ka4_2025_1a_3	WM
Ka4_2025_1a_3	WM
Ka4_2025_1a_3	Rondel
Ka4_2025_1a_3	Trapezoid
Ka4_2025_1a_4	Elongate entire
Ka4_2025_1a_5	Trapezoid
Ka4_2025_1a_5	Blocky
Ka4_2025_1a_5	Elongate entire
Ka4_2025_1a_5	Elongate dentate
Ka4_2025_1a_5	WM
Ka4_2025_1a_6	Crenate
Ka4_2025_1a_6	Crenate
Ka4_2025_1a_6	Trapezoid
Ka4_2025_1a_6	Tracheary
Ka4_2025_1a_6	WM
Ka4_2025_1a_6	WM
Ka4_2025_1a_7	Elongate entire
Ka4_2025_1a_8	Elongate entire
Ka4_2025_1a_8	WM
Ka4_2025_1a_8	WM
Ka4_2025_1a_9	Rondel
Ka4_2025_1a_9	Crystal
Ka4_2025_1a_9	WM
Ka4_2025_1a_10	Tracheary
Ka4_2025_1a_10	Trapezoid
Ka4_2025_1a_10	WM
Ka4_2025_1a_11	Elongate entire
Ka4_2025_1a_12	Crenate
Ka4_2025_1a_13	Crenate
Ka4_2025_1a_13	WM
Ka4_2025_1a_14	Elongate entire
Ka4_2025_1a_14	Elongate entire
Ka4_2025_1a_15	Rondel
Ka4_2025_1a_17	Elongate dentate
Ka4_2025_1a_21	Elongate entire
Ka4_2025_1a_22	Elongate entire
Ka4_2025_1a_24	Elongate dendritic
Ka4_2025_1a_24	Acute bulbosus
Ka4_2025_1a_25	WM
Ka4_2025_1a_26	Trapezoid
Ka4_2025_1a_26	Elongate sinuate
Ka4_2025_1a_26	Crystal
Ka4_2025_1a_26	Crenate
Ka4_2025_1a_26	WM
Ka4_2025_1a_27	Blocky
Ka4_2025_1a_28	WM
Ka4_2025_1a_30	Elongate entire
Ka4_2025_1a_31	Elongate dentate
Ka4_2025_1a_32	Elongate entire
Ka4_2025_1a_33	Elongate sinuate
Ka4_2025_1a_36	Tracheary
Ka4_2025_1a_39	Polylobate
Ka4_2025_1a_40	Elongate sinuate
Ka4_2025_1a_42	Elongate dentate
Ka4_2025_1a_42	Elongate dentate
Ka4_2025_1a_44	Acute bulbosus
Ka4_2025_1a_45	Elongate entire
Ka4_2025_1a_48	Elongate sinuate
Ka4_2025_1a_49	Saddle
Ka4_2025_1a_49	Saddle
Ka4_2025_1a_54	Bulliform flabellate
Ka4_2025_1a_70	Rondel
Ka4_2025_1a_72	Blocky
Ka4_2025_1a_82	Elongate dentate
Ka4_2025_1a_83	Elongate dendritic
Ka4_2025_1a_102	Blocky
Ka4_2025_1a_106	Elongate sinuate
Ka4_2025_1a_107	MULTICELL
Ka4_2025_1a_114	Tracheary
Ka4_2025_1a_127	diatom
Ka4_2025_1a_137	Blocky
Ka4_2025_1a_153	MULTICELL
Ka4_2025_1a_161	Acute bulbosus
Ka4_2025_1a_164	Elongate dendritic
Ka4_2025_1a_167	WM
Ka4_2025_1a_170	MULTICELL
Ka4_2025_1a_172	Elongate dendritic
Ka4_2025_1a_172	Elongate dendritic
Ka4_2025_1a_173	Elongate dendritic
Ka4_2025_1a_175	MULTICELL
Ka4_2025_1a_177	Elongate entire
Ka4_2025_1a_178	Blocky
Ka4_2025_1a_192	Elongate dendritic
Ka4_2025_1a_198	Elongate entire
Ka4_2025_1a_209	Elongate entire
Ka4_2025_1a_213	Elongate dendritic
Ka4_2025_1a_218	Elongate dendritic
Ka4_2025_1a_231	Elongate dendritic
Ka4_2025_1a_231	Elongate entire
Ka4_2025_1a_242	Acute bulbosus
Ka4_2025_1a_243	Elongate dentate
Ka4_2025_1a_244	Acute bulbosus
Ka4_2025_1a_252	Elongate dendritic

Ka4_2025_1b

Sample no	Identifications
Ka4_2025_1b_1	Blocky
Ka4_2025_1b_2	Rondel
Ka4_2025_1b_3	Elongate sinuate
Ka4_2025_1b_4	Crenate
Ka4_2025_1b_5	Rondel
Ka4_2025_1b_6	Elongate dendritic
Ka4_2025_1b_6	Elongate dendritic
Ka4_2025_1b_7	Acute bulbosus
Ka4_2025_1b_8	Rondel
Ka4_2025_1b_9	Elongate entire
Ka4_2025_1b_10	Saddle
Ka4_2025_1b_11	Elongate dendritic
Ka4_2025_1b_12	WM
Ka4_2025_1b_13	Elongate dendritic
Ka4_2025_1b_14	Elongate dendritic
Ka4_2025_1b_14	Trapezoid
Ka4_2025_1b_15	Acute bulbosus
Ka4_2025_1b_16	Elongate dendritic
Ka4_2025_1b_17	Elongate dendritic
Ka4_2025_1b_18	Elongate dendritic
Ka4_2025_1b_19	Elongate dendritic
Ka4_2025_1b_20	Elongate dendritic
Ka4_2025_1b_21	Elongate entire
Ka4_2025_1b_22	Acute bulbosus
Ka4_2025_1b_23	Elongate dendritic

Ka4_2025_1b_24	Elongate dendritic

Ka4_2025_1b_25	Bulliform flabellate
Ka4_2025_1b_26	WM

Ka4_2025_1b_27	Acute bulbosus
Ka4_2025_1b_28	Elongate sinuate
Ka4_2025_1b_28	Crenate

Ka4_2025_1c

Sample no	Identifications
Ka4_2025_1c_1	Elongate dendritic
Ka4_2025_1c_2	Saddle
Ka4_2025_1c_3	Elongate dendritic
Ka4_2025_1c_4	Rondel
Ka4_2025_1c_5	Elongate entire
Ka4_2025_1c_6	Polylobate
Ka4_2025_1c_7	Rondel
Ka4_2025_1c_8	Rondel
Ka4_2025_1c_9	Bulliform flabellate
Ka4_2025_1c_10	Rondel
Ka4_2025_1c_11	MULTICELL
Ka4_2025_1c_12	Saddle
Ka4_2025_1c_13	Rondel
Ka4_2025_1c_14	Bulliform flabellate
Ka4_2025_1c_15	Bilobate
Ka4_2025_1c_16	Crenate
Ka4_2025_1c_16	Elongate dentate

Ka4_2025_1c_16	WM
Ka4_2025_1c_17	Elongate dendritic
Ka4_2025_1c_18	Spheroid
Ka4_2025_1c_19	Crenate
Ka4_2025_1c_20	MULTICELL
Ka4_2025_1c_22	Trapezoid
Ka4_2025_1c_23	Elongate dentate
Ka4_2025_1c_24	Acute bulbosus
Ka4_2025_1c_25	Elongate dendritic
Ka4_2025_1c_26	Elongate dendritic
Ka4_2025_1c_27	Bulliform flabellate
Ka4_2025_1c_28	MULTICELL
Ka4_2025_1c_29	WM
Ka4_2025_1c_30	Acute bulbosus
Ka4_2025_1c_30	Elongate thick
Ka4_2025_1c_31	Blocky
Ka4_2025_1c_32	Bulliform flabellate
Ka4_2025_1c_33	Blocky

Ka4_2025_1c_34	Bulliform flabellate
Ka4_2025_1c_35	Bulliform flabellate
Ka4_2025_1c_36	Elongate dendritic
Ka4_2025_1c_37	Acute bulbosus
Ka4_2025_1c_38	Acute bulbosus
Ka4_2025_1c_39	MULTICELL
Ka4_2025_1c_40	Elongate dendritic
Ka4_2025_1c_40	Elongate sinuate
Ka4_2025_1c_41	Elongate dendritic
Ka4_2025_1c_42	Bulliform flabellate
Ka4_2025_1c_43	Cross
Ka4_2025_1c_44	Acute bulbosus
Ka4_2025_1c_45	Bulliform flabellate
Ka4_2025_1c_46	Elongate sinuate

Ka4_2025_1d

Sample no	Identifications
Ka4_2025_1d_1	Crenate
Ka4_2025_1d_2	Elongate sinuate
Ka4_2025_1d_3	Trapezoid
Ka4_2025_1d_4	Elongate dendritic
Ka4_2025_1d_5	Polylobate
Ka4_2025_1d_6	MULTICELL
Ka4_2025_1d_7	Elongate dentate
Ka4_2025_1d_8	Elongate sinuate

4_2025_1d_9	Blocky
Ka4_2025_1d_9	Acute bulbosus
Ka4_2025_1d_10	Elongate sinuate
Ka4_2025_1d_11	Bulliform flabellate
Ka4_2025_1d_12	Cyst
Ka4_2025_1d_13	Elongate dendritic
Ka4_2025_1d_14	Elongate sinuate
Ka4_2025_1d_15	Bilobate
Ka4_2025_1d_16	Ameboid

Ka4_2025_1d_17	Elongate dendritic
Ka4_2025_1d_18	MULTICELL
Ka4_2025_1d_19	Tracheary
Ka4_2025_1d_20	Bulliform flabellate
Ka4_2025_1d_21	Elongate Velloate
Ka4_2025_1d_22	Tracheary
Ka4_2025_1d_23	Polylobate
Ka4_2025_1d_25	Tracheary
Ka4_2025_1d_28	Trapezoid

Ka4_2025_1e

Sample no	Identifications
Ka4_2025_1e_1	Ameboid?

Ka4_2025_1e_2	Rondel
Ka4_2025_1e_3	MULTICELL
Ka4_2025_1e_5	MULTICELL

Ka4_2025_1e_6	MULTICELL

Ka4_2025_1f

Sample no	Identifications
Ka4_2025_1f_1	Bulliform flabellate
Ka4_2025_1f_2	MULTICELL
Ka4_2025_1f_3	Tracheary
Ka4_2025_1f_4	Spheroid

Ka4_2025_1f_5	Elongate dendritic
Ka4_2025_1f_6	Acute bulbosus
Ka4_2025_1f_6	Elongate entire
Ka4_2025_1f_7	Acute bulbosus
Ka4_2025_1f_8	Bulliform flabellate

Ka4_2025_1f_9	Elongate dendritic
Ka4_2025_1f_10	Elongate dendritic
Ka4_2025_1f_11	Indeterminate
Ka4_2025_1f_12	Bulliform flabellate

Ka4_2025_1g

Sample no	Identifications
Ka4_2025_1g_1	Tracheary
Ka4_2025_1g_2	Elongate entire

Ka4_2025_1g_3	Elongate entire
Ka4_2025_1g_4	Cross
Ka4_2025_1g_4	Crenate
Ka4_2025_1g_5	Stoma

Ka4_2025_1g_6	Bulliform flabellate
Ka4_2025_1g_7	Elongate dendritic

Ka4_2025_1h

Sample no	Identifications
Ka4_2025_1h_1	MULTICELL
Ka4_2025_1h_2	Bulliform flabellate
Ka4_2025_1h_2	Elongate entire
Ka4_2025_1h_2	MULTICELL
Ka4_2025_1h_2	Indet
Ka4_2025_1h_3	Bilobate

Ka4_2025_1i

Sample no	Identifications
Ka4_2025_1i_1	Elongate dendritic
Ka4_2025_1i_2	Tracheary
Ka4_2025_1i_3	MULTICELL
Ka4_2025_1i_4	MULTICELL
Ka4_2025_1i_5	MULTICELL
Ka4_2025_1i_6	Tracheary
Ka4_2025_1i_7	Elongate dendritic
Ka4_2025_1i_8	Bulliform flabellate
Ka4_2025_1i_9	Elongate dendritic
Ka4_2025_1i_10	Elongate dendritic
Ka4_2025_1i_11	Elongate dendritic
Ka4_2025_1i_12	Indeterminate
Ka4_2025_1i_13	Indeterminate
Ka4_2025_1i_14	Indeterminate
Ka4_2025_1i_15	Elongate sinuate

Ka4_2025_1j

Sample no	Identifications
Ka4_2025_1j_1	Elongate sinuate
Ka4_2025_1j_2	Indeterminate
Ka4_2025_1j_3	Crenate
Ka4_2025_1j_4	Bilobate
Ka4_2025_1j_5	Elongate dendritic
Ka4_2025_1j_6	WM
Ka4_2025_1j_7	Crenate
Ka4_2025_1j_8	Tracheary

Ka4_2025_1k

Sample no	Identifications
Ka4_2025_1k_1	Bilobate
Ka4_2025_1k_2	MULTICELL
Ka4_2025_1k_3	Cross
Ka4_2025_1k_4	Crenate

Ka4_2025_1l

Sample no	Identifications
Ka4_2025_1l_1	MULTICELL
Ka4_2025_1l_2	Indeterminate
Ka4_2025_1l_3	MULTICELL
Ka4_2025_1l_4	MULTICELL
Ka4_2025_1l_5	MULTICELL
Ka4_2025_1l_6	Tracheary pitted
Ka4_2025_1l_7	MULTICELL
Ka4_2025_1l_8	Indeterminate
Ka4_2025_1l_9	MULTICELL
Ka4_2025_1l_10	MULTICELL
Ka4_2025_1l_11	MULTICELL
Ka4_2025_1l_12	MULTICELL
Ka4_2025_1l_13	MULTICELL
Ka4_2025_1l_14	Tracheary
Ka4_2025_1l_15	Ameboid?
Ka4_2025_1l_16	Tracheary
Ka4_2025_1l_17	MULTICELL
Ka4_2025_1l_18	MULTICELL
Ka4_2025_1l_19	MULTICELL
Ka4_2025_1l_20	MULTICELL
Ka4_2025_1l_22	MULTICELL
Ka4_2025_1l_23	MULTICELL
Ka4_2025_1l_24	MULTICELL
Ka4_2025_1l_26	MULTICELL
Ka4_2025_1l_27	Elongate sinuate
Ka4_2025_1l_28	MULTICELL
Ka4_2025_1l_29	MULTICELL
Ka4_2025_1l_30	MULTICELL
Ka4_2025_1l_31	MULTICELL
Ka4_2025_1l_32	MULTICELL

Ka4_2025_1m

Sample no	Identifications
Ka4_2025_1m_1	Bulliform flabellate
Ka4_2025_1m_2	MULTICELL
Ka4_2025_1m_4	MULTICELL
Ka4_2025_1m_6	Elongate entire
Ka4_2025_1m_7	Crenate
Ka4_2025_1m_8	Elongate sinuate
Ka4_2025_1m_9	Bulliform flabellate
Ka4_2025_1m_10	Tracheary
Ka4_2025_1m_11	Elongate dendritic
Ka4_2025_1m_12	MULTICELL
Ka4_2025_1m_14	Tracheary
Ka4_2025_1m_15	Indeterminate
Ka4_2025_1m_16	Bilobate
Ka4_2025_1m_17	Indeterminate
Ka4_2025_1m_18	Cross
Ka4_2025_1m_19	Elongate dendritic

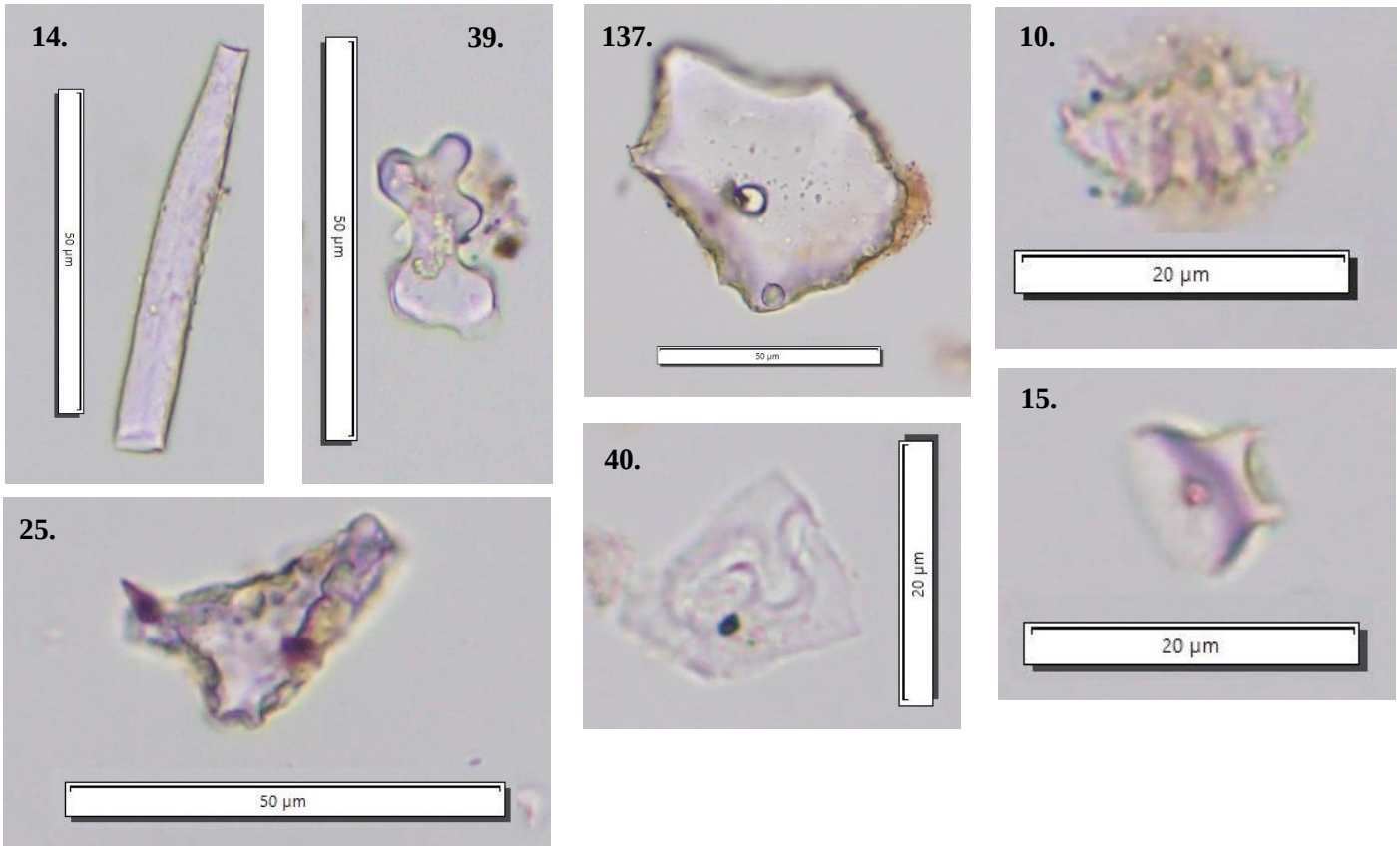
Ka4_2025_1n

Sample no	Identifications
Ka4_2025_1n_1	MULTICELL
Ka4_2025_1n_2	MULTICELL
Ka4_2025_1n_3	MULTICELL
Ka4_2025_1n_4	MULTICELL
Ka4_2025_1n_5	MULTICELL
Ka4_2025_1n_6	MULTICELL
Ka4_2025_1n_7	MULTICELL
Ka4_2025_1n_8	Indeterminate
Ka4_2025_1n_9	MULTICELL
Ka4_2025_1n_10	MULTICELL
Ka4_2025_1n_11	MULTICELL
Ka4_2025_1n_12	Crenate
Ka4_2025_1n_13	Tracheary
Ka4_2025_1n_14	MULTICELL
Ka4_2025_1n_15	Elongate entire
Ka4_2025_1n_16	MULTICELL
Ka4_2025_1n_18	MULTICELL
Ka4_2025_1n_19	MULTICELL
Ka4_2025_1n_20	MULTICELL
Ka4_2025_1n_21	MULTICELL
Ka4_2025_1n_22	Indeterminate
Ka4_2025_1n_23	MULTICELL
Ka4_2025_1n_24	WM
Ka4_2025_1n_25	MULTICELL
Ka4_2025_1n_26	MULTICELL
Ka4_2025_1n_27	MULTICELL
Ka4_2025_1n_28	MULTICELL
Ka4_2025_1n_29	Elongate dendritic
Ka4_2025_1n_31	MULTICELL
Ka4_2025_1n_32	MULTICELL
Ka4_2025_1n_33	MULTICELL
Ka4_2025_1n_34	MULTICELL
Ka4_2025_1n_35	MULTICELL
Ka4_2025_1n_36	MULTICELL
Ka4_2025_1n_37	MULTICELL

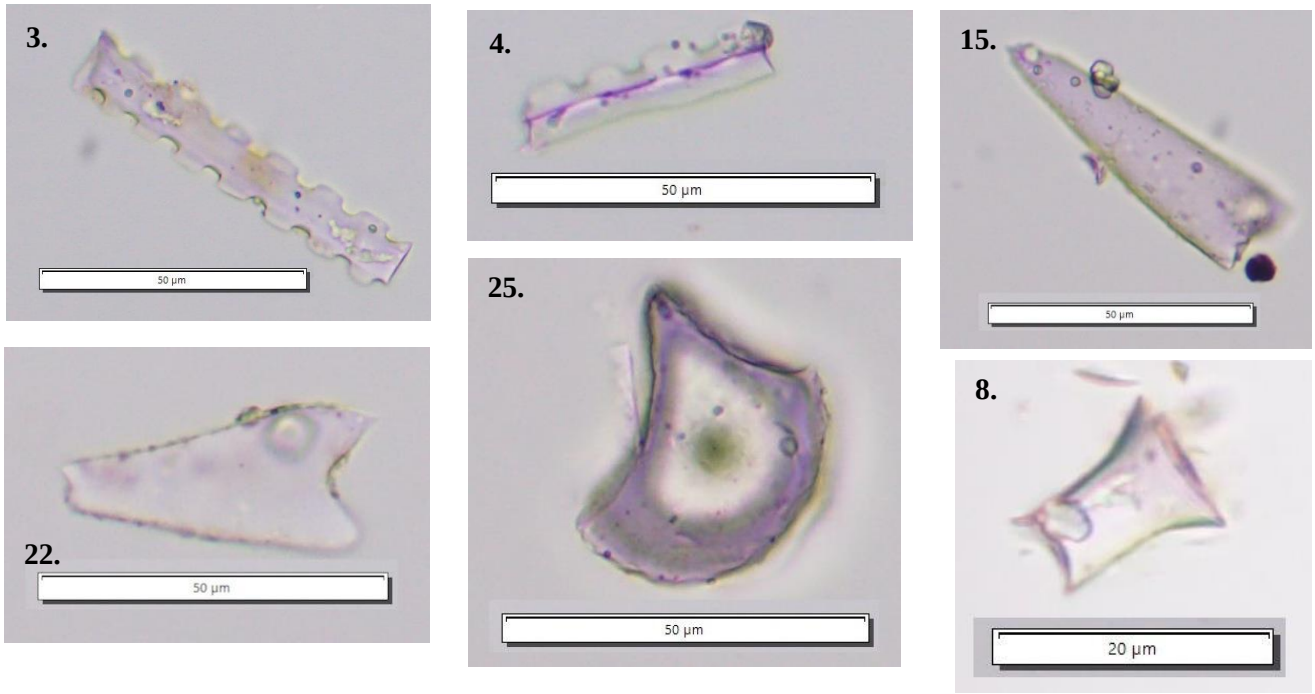
Ka4_2025_1o

Sample no	Identifications
Ka4_2025_1o_1	MULTICELL
Ka4_2025_1o_2	MULTICELL
Ka4_2025_1o_3	MULTICELL
Ka4_2025_1o_4	MULTICELL
Ka4_2025_1o_5	MULTICELL
Ka4_2025_1o_6	MULTICELL

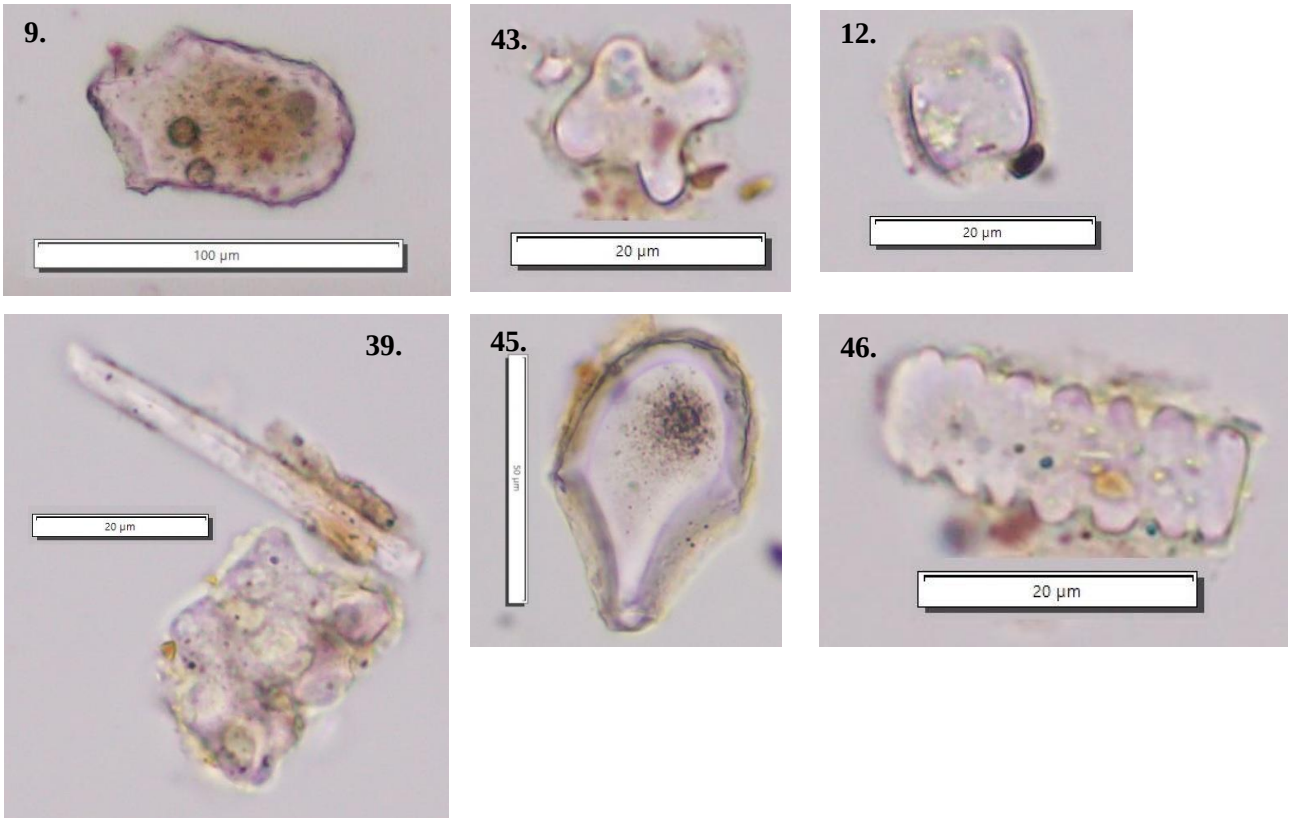
Ryc. 1 Obiekt 1 próba 1a, numery zdjęć odpowiadają numerom zidentyfikowanych fitolitów w tabeli Ka4_2025_1a.
Fig. 1 Feature 1 sample 1a: the photo number corresponds to the phytolith number in the table Ka4_2025_1a.



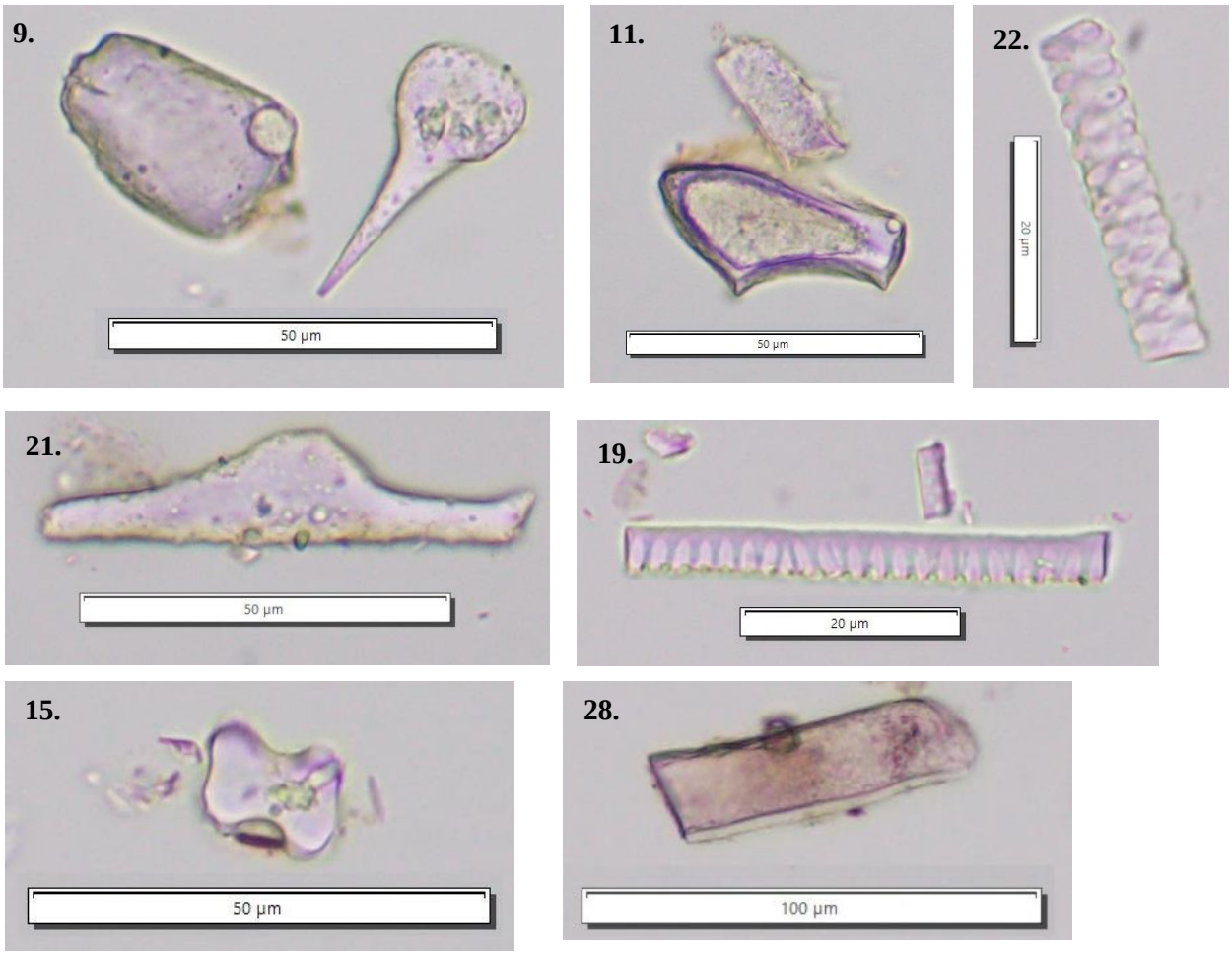
Ryc. 2 Obiekt 1 próba 1b, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_1b.
Fig. 2 Feature 1 sample 1b: the photo number corresponds to the phytolith number in the table Ka4_2025_1b.



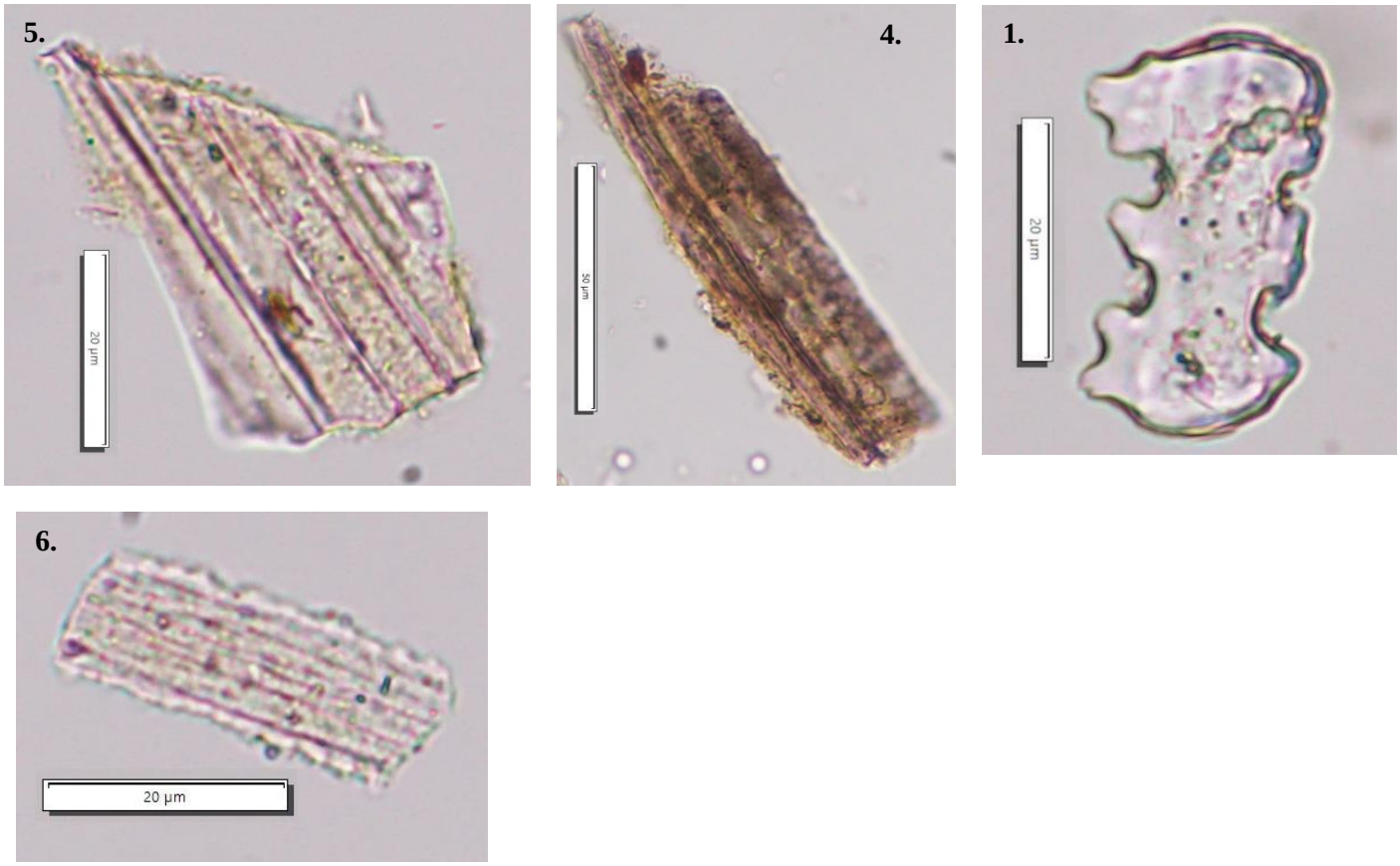
Ryc. 3 Obiekt 1 próba 1c, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_1c.
Fig. 3 Feature 1 sample 1c: the photo number corresponds to the phytolith number in the table Ka4_2025_1c.



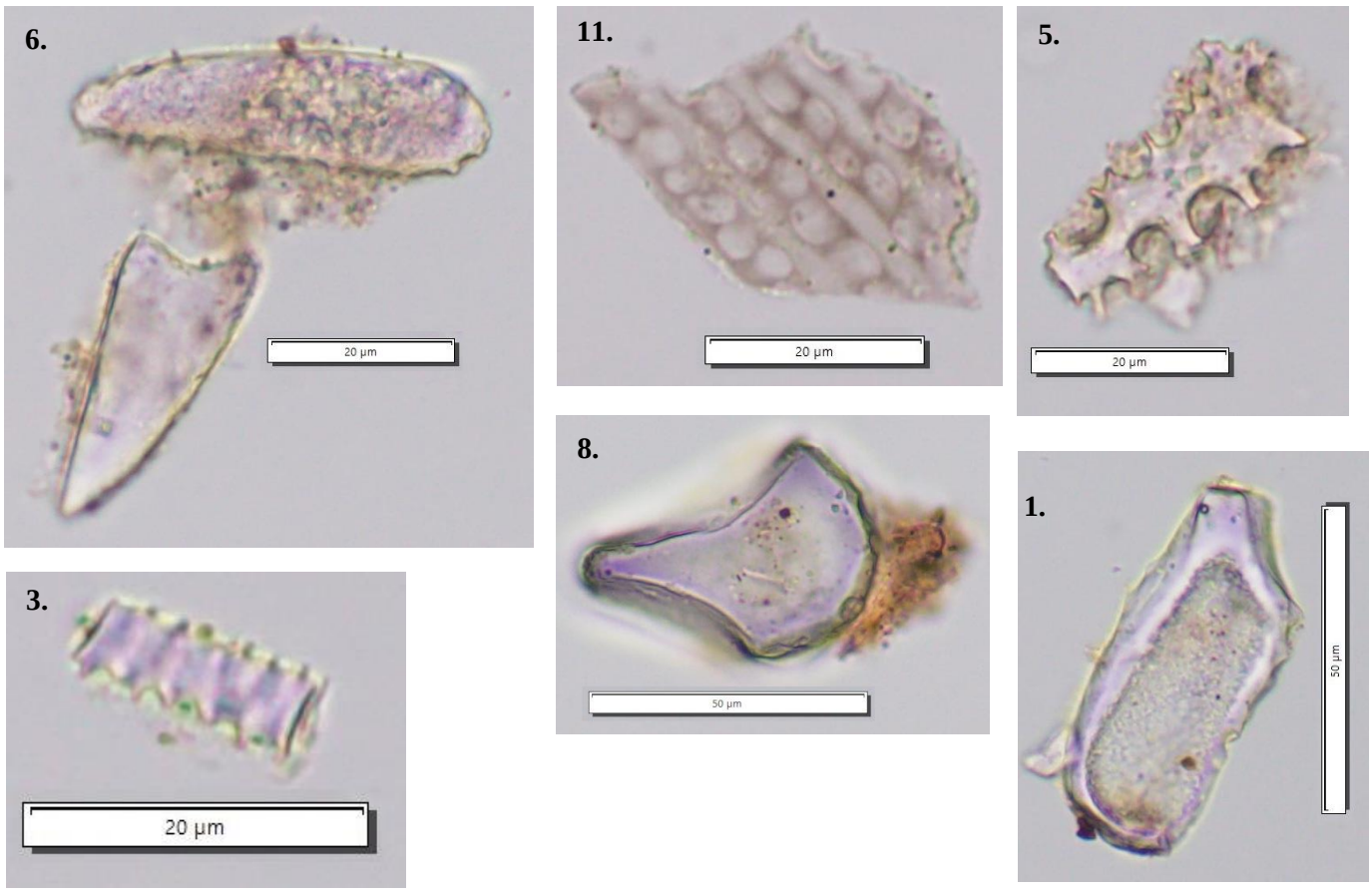
Ryc. 4 Obiekt 1 próba 1d, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_1d.
Fig. 4 Feature 1 sample 1d: the photo number corresponds to the phytolith number in the table Ka4_2025_1d.



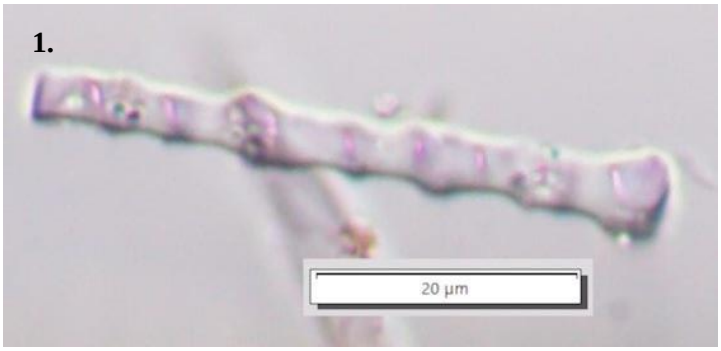
Ryc. 5 Obiekt 1 próba 1e, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka_2025_1e.
Fig. 5 Feature 1 sample 1e: the photo number corresponds to the phytolith number in the table Ka_2025_1e.

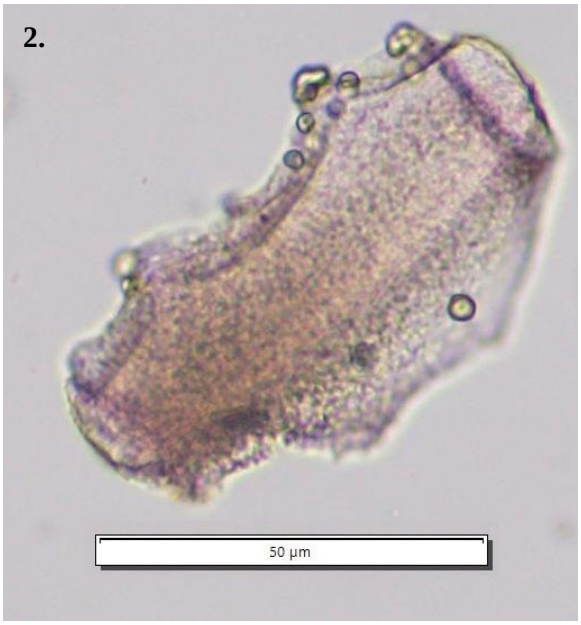


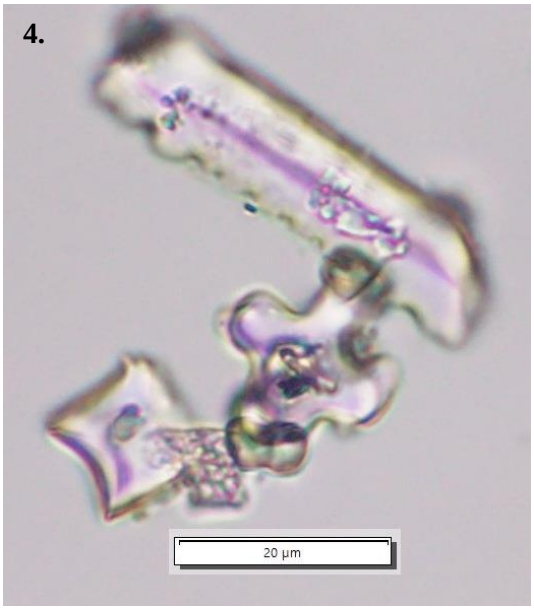
Ryc. 6 Obiekt 1 próba 1f, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka_2025_1f.
Fig. 6 Feature 1 sample 1f: the photo number corresponds to the phytolith number in the table Ka_2025_1f.

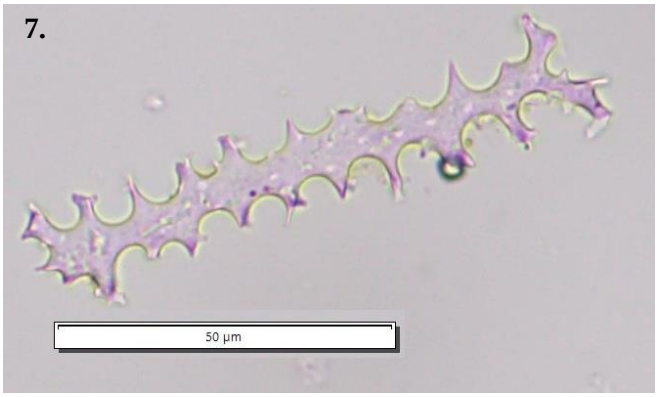


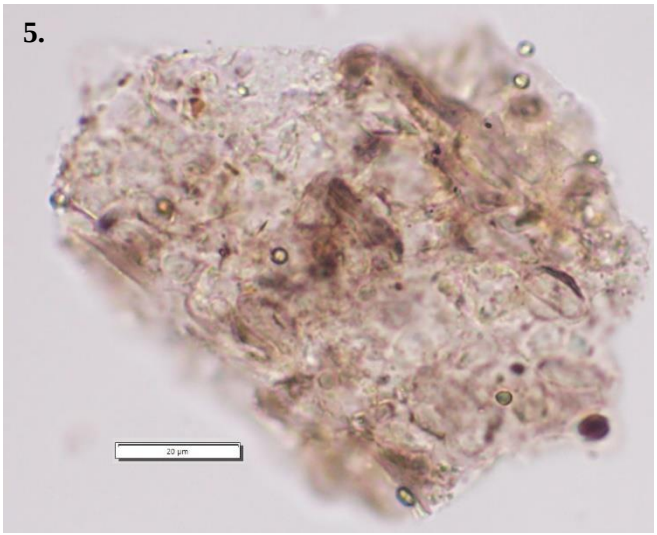
Ryc. 7 Obiekt 1 próba 1g, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka_2025_1g.
Fig. 7 Feature 1 sample 1g: the photo number corresponds to the phytolith number in the table Ka_2025_1g.



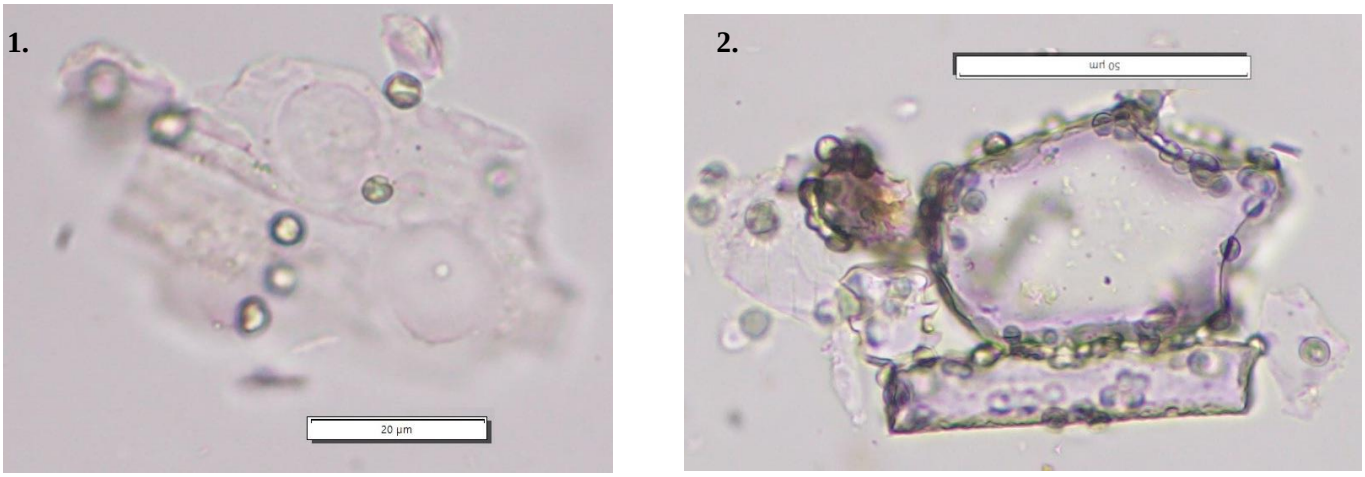




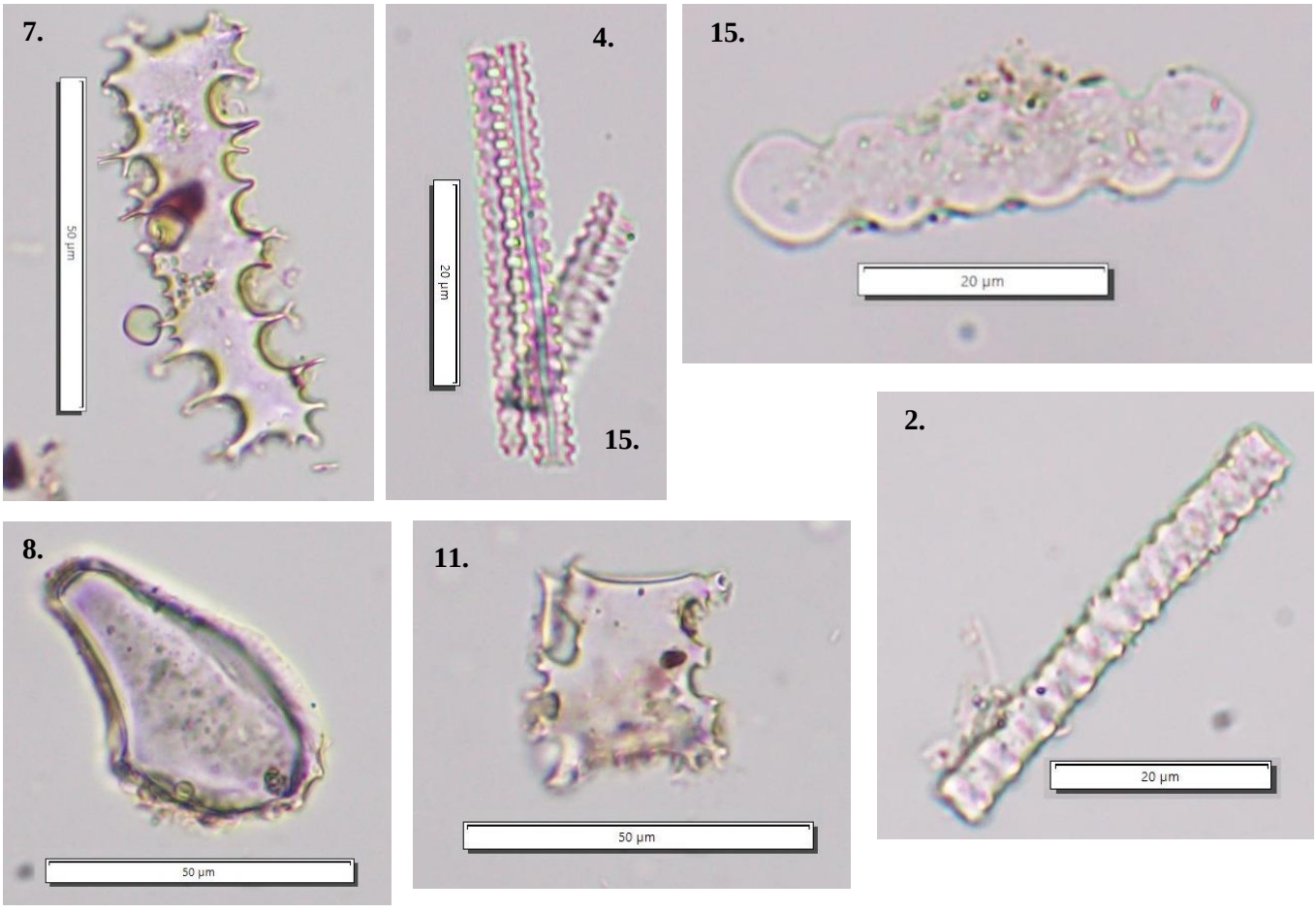




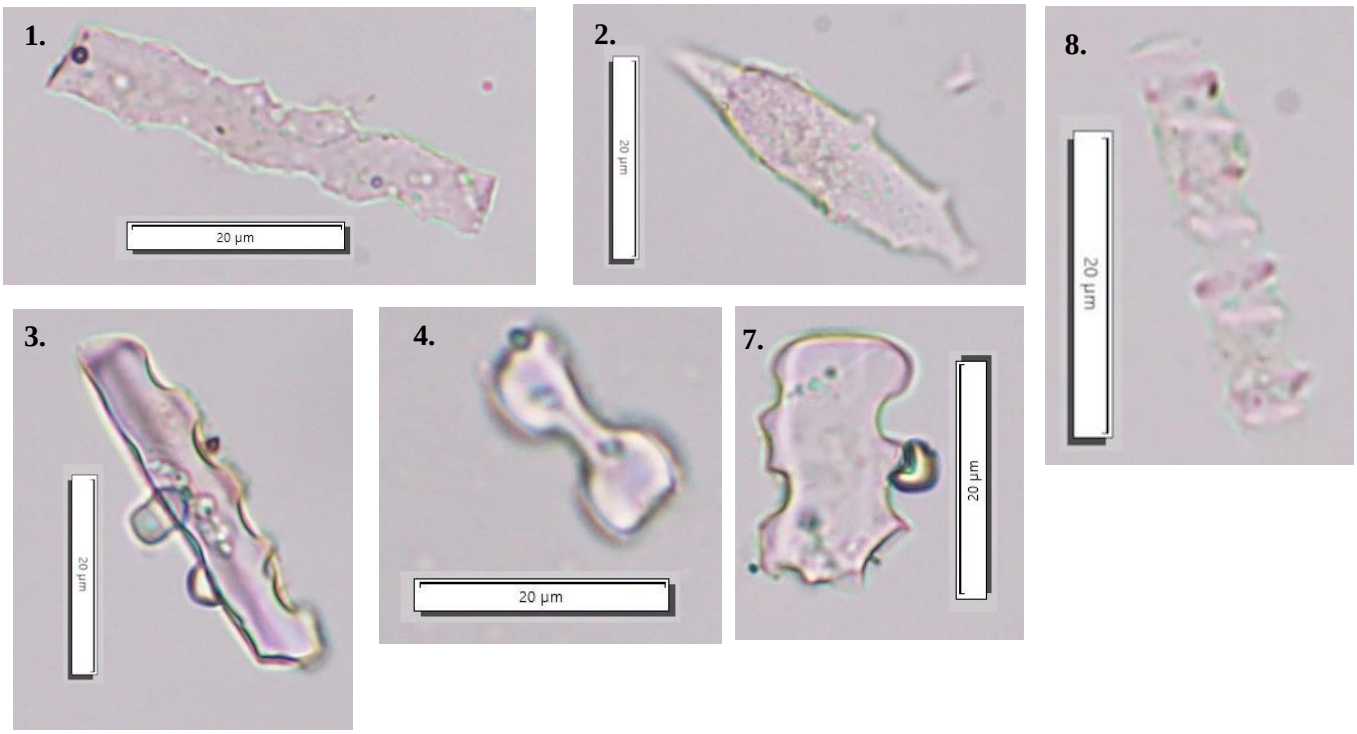
Ryc. 8 Obiekt 1 próba 1h, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka_2025_1h.
Fig. 8 Feature 1 sample 1h: the photo number corresponds to the phytolith number in the table Ka_2025_1h.



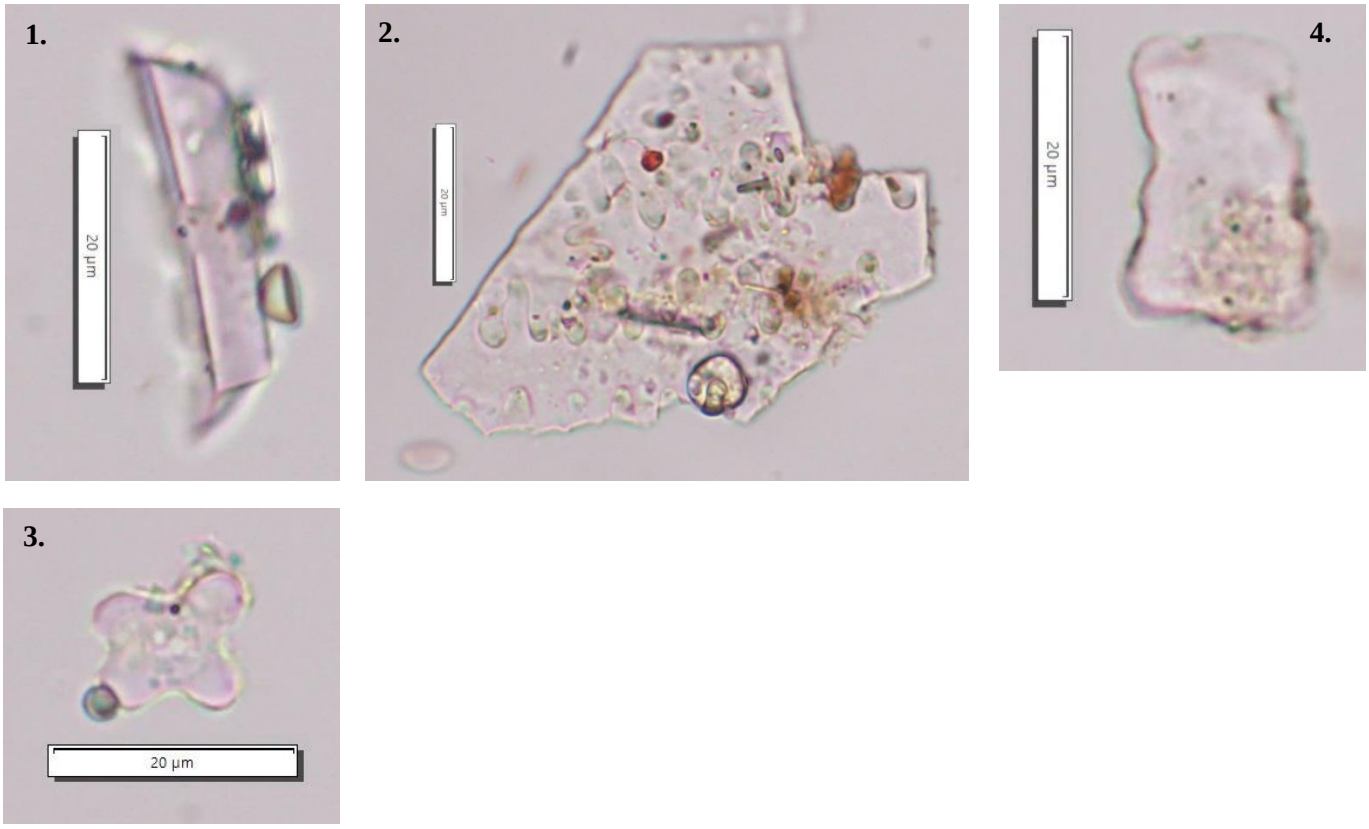
Ryc. 9 Obiekt 1 próba 1i, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka_2025_1i.
Fig. 9 Feature 1 sample 1i: the photo number corresponds to the phytolith number in the table Ka_2025_1i.



Ryc. 10 Obiekt 1 próba 1j, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka_2025_1j.
Fig. 10 Feature 1 sample 1j, the number of the photo relates to the number of the phytolith in the table Ka_2025_1j.

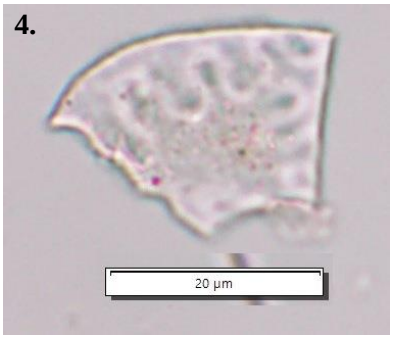


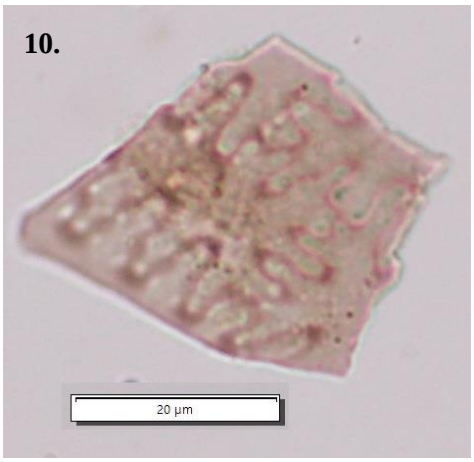
Ryc. 11 Obiekt 1 próba 1k, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka_2025_1k.
Fig. 11 Feature 1 sample 1k: the photo number corresponds to the phytolith number in the table Ka_2025_1k.

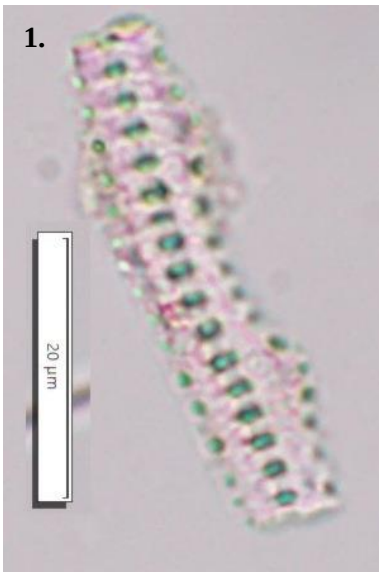


Ryc. 12 Obiekt 1 próba 1l, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka_2025_1l.
Fig. 12 Feature 1 sample 1l: the photo number corresponds to the phytolith number in the table Ka_2025_1l.

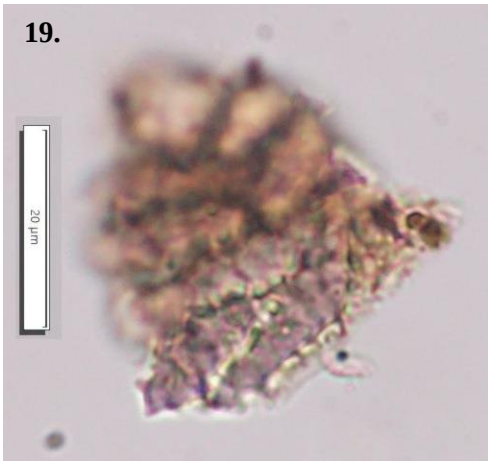










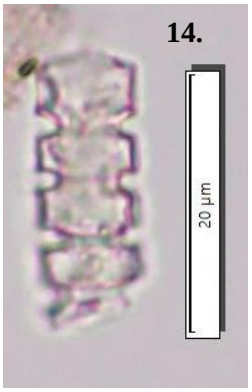




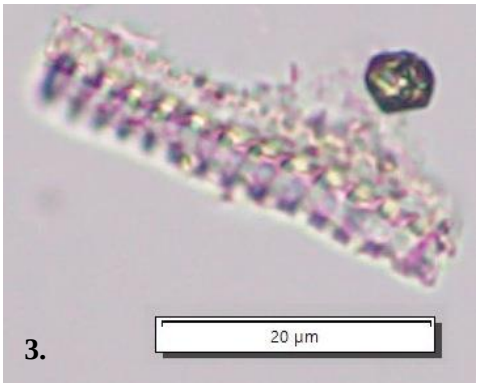


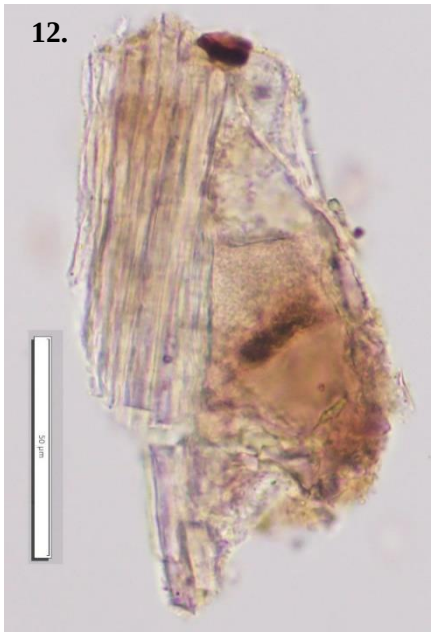
Ryc. 13 Obiekt 1 próba 1m, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka_2025_1m.
Fig. 13 Feature 1 sample 1m: the photo number corresponds to the phytolith number in the table Ka_2025_1m.



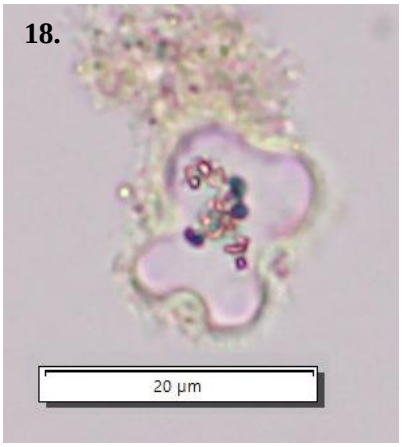


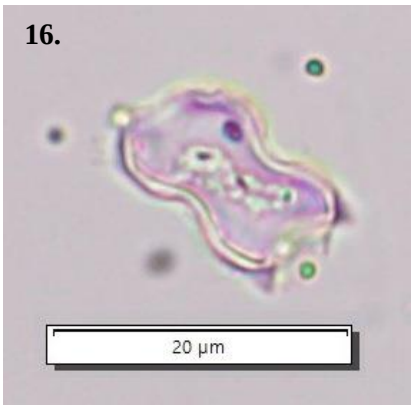






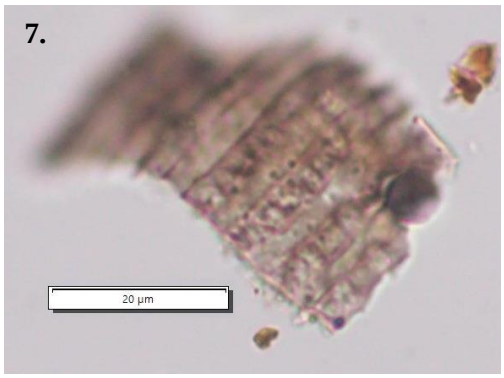


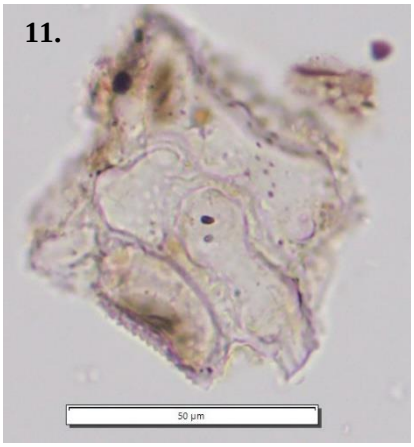




Ryc. 14 Obiekt 1 próba 1n, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka_2025_1n.
Fig. 14 Feature 1 sample 1n: the photo number corresponds to the phytolith number in the table Ka_2025_1n.

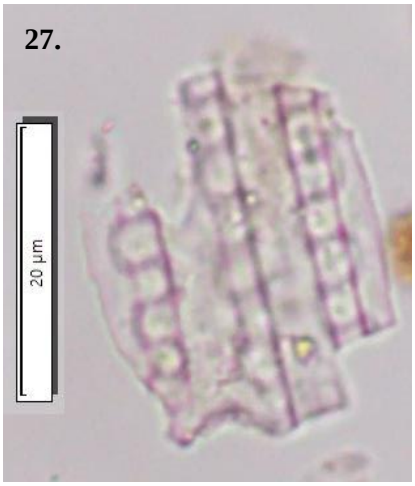








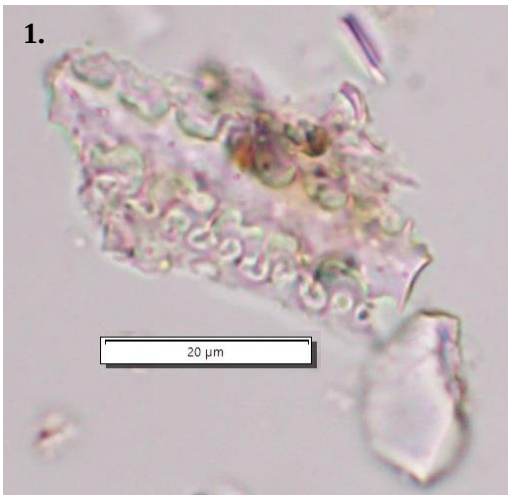








Ryc. 15 Obiekt 1 próba 1o, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka_2025_1o.
Fig. 15 Feature 1 sample 1o: the photo number corresponds to the phytolith number in the table Ka_2025_1o.

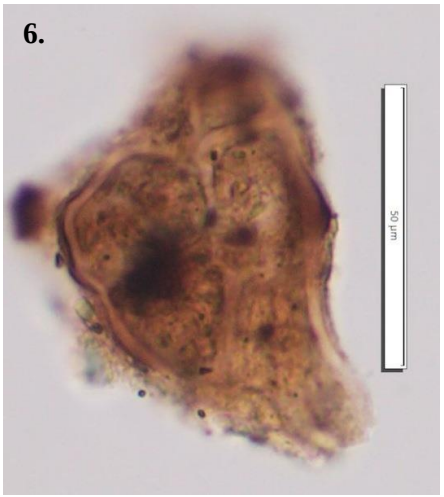












OBIEKT/FEATURE 3

Ka4_2025_3_1

Sample no	Identifications
Ka4_2025_3_1_1	WM
Ka4_2025_3_1_2	Elongate dendritic
Ka4_2025_3_1_3	WM
Ka4_2025_3_1_4	Crenate

Ka4_2025_3_2

Sample no	Identifications
Ka4_2025_3_2_1	Crenate
Ka4_2025_3_2_2	Crenate
Ka4_2025_3_2_3	Bilobate
Ka4_2025_3_2_4	Crenate
Ka4_2025_3_2_5	Crenate
Ka4_2025_3_2_6	Crenate

Ka4_2025_3_3

Sample no	Identifications
Ka4_2025_3_3_1	Elongate dendritic
Ka4_2025_3_3_2	WM
Ka4_2025_3_3_3	Elongate sinuate
Ka4_2025_3_3_4	Elongate sinuate

Ka4_2025_3_4

Sample no	Identifications
Ka4_2025_3_4_1	Rondel Tall
Ka4_2025_3_4_2	Tracheary
Ka4_2025_3_4_3	MULTICELL
Ka4_2025_3_4_4	Tracheary
Ka4_2025_3_4_5	Acute bulbosus
Ka4_2025_3_4_6	Bilobate
Ka4_2025_3_4_7	Saddle
Ka4_2025_3_4_8	MULTICELL
Ka4_2025_3_4_9	MULTICELL
Ka4_2025_3_4_10	MULTICELL
Ka4_2025_3_4_11	MULTICELL
Ka4_2025_3_4_13	Saddle
Ka4_2025_3_4_14	MULTICELL
Ka4_2025_3_4_15	Papillate
Ka4_2025_3_4_16	Crenate
Ka4_2025_3_4_17	MULTICELL
Ka4_2025_3_4_18	MULTICELL
Ka4_2025_3_4_19	Elongate sinuate
Ka4_2025_3_4_20	Papillate
Ka4_2025_3_4_21	Elongate dendritic
Ka4_2025_3_4_22	MULTICELL
Ka4_2025_3_4_23	MULTICELL
Ka4_2025_3_4_25	MULTICELL
Ka4_2025_3_4_26	Tracheary
Ka4_2025_3_4_28	Elongate thick
Ka4_2025_3_4_31	MULTICELL
Ka4_2025_3_4_32	MULTICELL
Ka4_2025_3_4_33	Saddle
Ka4_2025_3_4_34	MULTICELL
Ka4_2025_3_4_35	MULTICELL
Ka4_2025_3_4_36	MULTICELL
Ka4_2025_3_4_37	WM
Ka4_2025_3_4_38	MULTICELL
	MULTICELL

Ka4_2025_3_5

Sample no	Identifications
Ka4_2025_3_5_1	Elongate dendritic
Ka4_2025_3_5_2	Elongate entire
Ka4_2025_3_5_3	Bilobate
Ka4_2025_3_5_4	WM
Ka4_2025_3_5_5	Crenate
Ka4_2025_3_5_6	Elongate entire
Ka4_2025_3_5_7	Rondel Tall

Ka4_2025_3_7

Sample no	Identifications
Ka4_2025_3_7_1	MULTICELL
Ka4_2025_3_7_2	MULTICELL
Ka4_2025_3_7_3	MULTICELL

Ka4_2025_3_8

Sample no	Identifications
Ka4_2025_3_8_1	Rondel
Ka4_2025_3_8_2	Elongate dendritic
Ka4_2025_3_8_3	Elongate dendritic
Ka4_2025_3_8_4	MULTICELL

Ka4_2025_3_9

Sample no	Identifications
Ka4_2025_3_9_1	Tracheary
Ka4_2025_3_9_2	Crenate
Ka4_2025_3_9_3	Crenate
Ka4_2025_3_9_4	Elongate dentate
Ka4_2025_3_9_5	WM
Ka4_2025_3_9_6	WM
Ka4_2025_3_9_7	Ameboid
Ka4_2025_3_9_8	Elongate dendritic

Ka4_2025_3_10

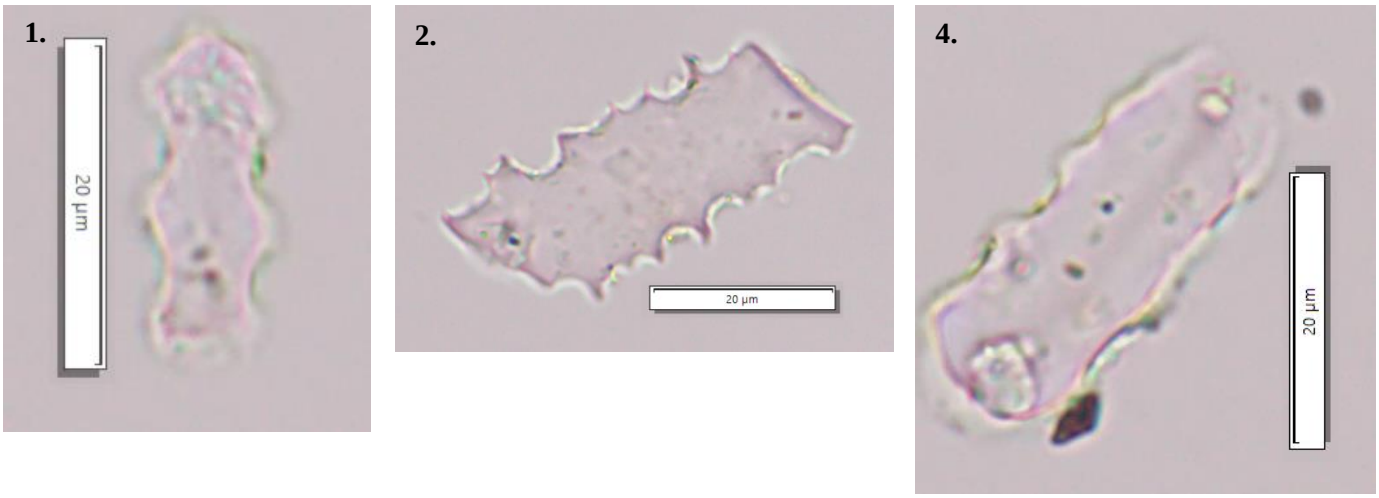
Sample no	Identifications
Ka4_2025_3_10_1	Elongate Facetate
Ka4_2025_3_10_2	MULTICELL
Ka4_2025_3_10_3	MULTICELL
Ka4_2025_3_10_4	MULTICELL
Ka4_2025_3_10_6	MULTICELL
Ka4_2025_3_10_7	Elongate thick
Ka4_2025_3_10_8	MULTICELL
Ka4_2025_3_10_9	Crenate
Ka4_2025_3_10_10	MULTICELL
Ka4_2025_3_10_11	Elongate entire
Ka4_2025_3_10_12	MULTICELL

Ka4_2025_3_10_13	Elongate dendritic
Ka4_2025_3_10_14	Tracheary
Ka4_2025_3_10_15	MULTICELL
Ka4_2025_3_10_16	Elongate entire
Ka4_2025_3_10_17	Elongate dendritic
Ka4_2025_3_10_18	MULTICELL
Ka4_2025_3_10_19	MULTICELL
Ka4_2025_3_10_20	MULTICELL
Ka4_2025_3_10_21	MULTICELL
Ka4_2025_3_10_22	Crenate
Ka4_2025_3_10_23	MULTICELL
Ka4_2025_3_10_24	Elongate dendritic
Ka4_2025_3_10_25	MULTICELL
Ka4_2025_3_10_26	MULTICELL
Ka4_2025_3_10_27	Crenate
Ka4_2025_3_10_28	Bulliform flabellate
Ka4_2025_3_10_29	MULTICELL
Ka4_2025_3_10_30	MULTICELL
Ka4_2025_3_10_31	MULTICELL
Ka4_2025_3_10_32	MULTICELL

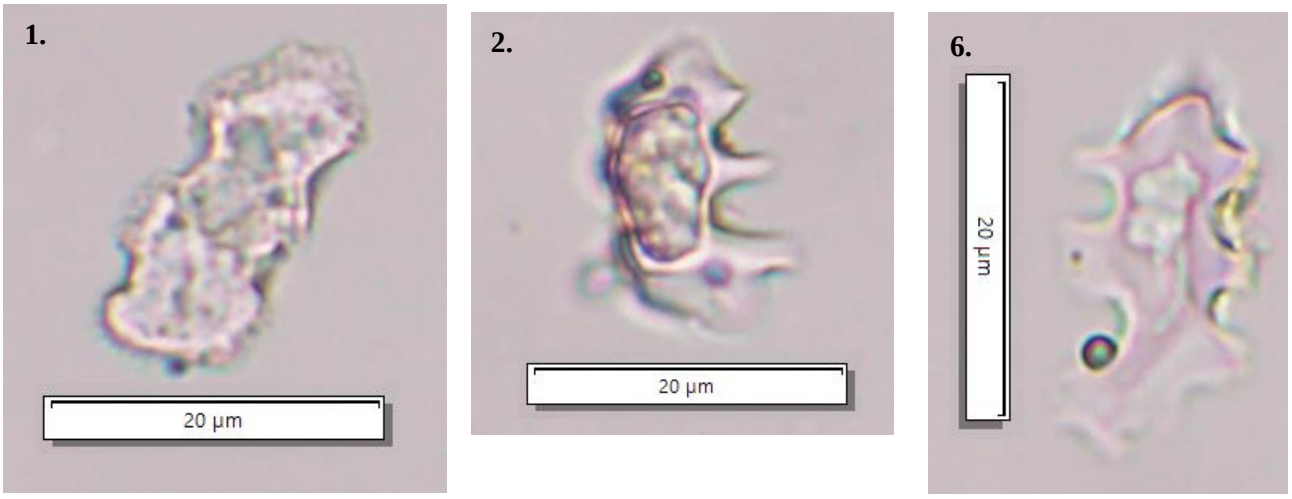
Ka4_2025_3_10_33	Elongate entire
Ka4_2025_3_10_34	MULTICELL
Ka4_2025_3_10_35	Elongate dendritic
Ka4_2025_3_10_36	MULTICELL
Ka4_2025_3_10_37	Bulliform flabellate
Ka4_2025_3_10_38	MULTICELL
Ka4_2025_3_10_39	MULTICELL
Ka4_2025_3_10_40	Saddle
Ka4_2025_3_10_41	MULTICELL
Ka4_2025_3_10_42	MULTICELL
Ka4_2025_3_10_44	MULTICELL
Ka4_2025_3_10_45	MULTICELL
Ka4_2025_3_10_46	Bulliform flabellate
Ka4_2025_3_10_47	Saddle
Ka4_2025_3_10_48	Elongate sinuate
Ka4_2025_3_10_49	MULTICELL
Ka4_2025_3_10_50	MULTICELL
Ka4_2025_3_10_51	Indeterminate
Ka4_2025_3_10_52	Elongate dendritic

Ka4_2025_3_10_53	MULTICELL
Ka4_2025_3_10_54	MULTICELL
Ka4_2025_3_10_55	Indeterminate
Ka4_2025_3_10_56	Indeterminate
Ka4_2025_3_10_57	MULTICELL
Ka4_2025_3_10_58	MULTICELL
Ka4_2025_3_10_59	MULTICELL
Ka4_2025_3_10_60	MULTICELL
Ka4_2025_3_10_61	MULTICELL
Ka4_2025_3_10_62	MULTICELL
Ka4_2025_3_10_63	MULTICELL
Ka4_2025_3_10_64	Crenate
Ka4_2025_3_10_65	MULTICELL
Ka4_2025_3_10_66	Acute bulbosus
Ka4_2025_3_10_67	MULTICELL
Ka4_2025_3_10_68	Spheroid
Ka4_2025_3_10_69	Polylobate
Ka4_2025_3_10_70	MULTICELL
Ka4_2025_3_10_71	MULTICELL
Ka4_2025_3_10_72	MULTICELL
Ka4_2025_3_10_73	MULTICELL
Ka4_2025_3_10_74	MULTICELL

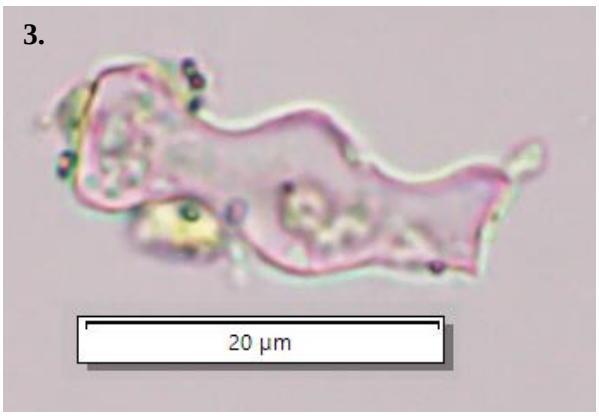
Ryc. 16 Obiekt 3 próba 1, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_3_1.
Fig. 16 Feature 3 sample 1: the photo number corresponds to the phytolith number in the table Ka4_2025_3_1.



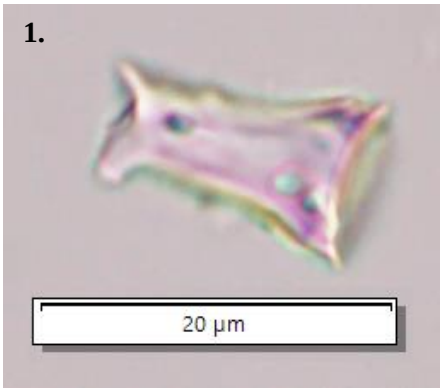
Ryc. 17 Obiekt 3 próba 2, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_3_2.
Fig. 17 Feature 3 sample 2: the photo number corresponds to the phytolith number in the table Ka4_2025_3_2.

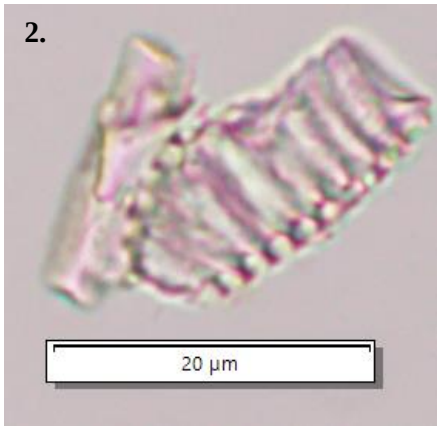


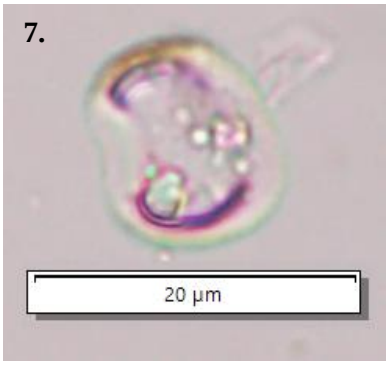
Ryc. 18 Obiekt 3 próba 3, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_3_3.
Fig. 18 Feature 3 sample 3: the photo number corresponds to the phytolith number in the table Ka4_2025_3_3.



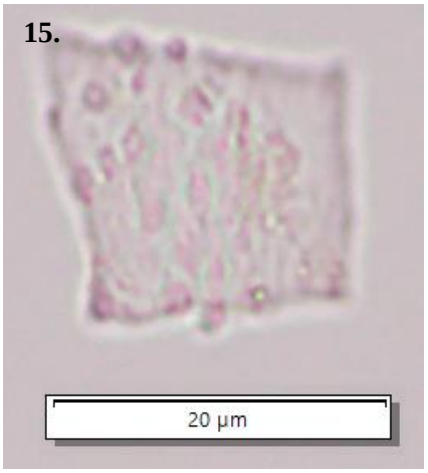
Ryc. 19 Obiekt 3 próba 4, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_3_4.
Fig. 19 Feature 3 sample 4: the photo number corresponds to the phytolith number in the table Ka4_2025_3_4.



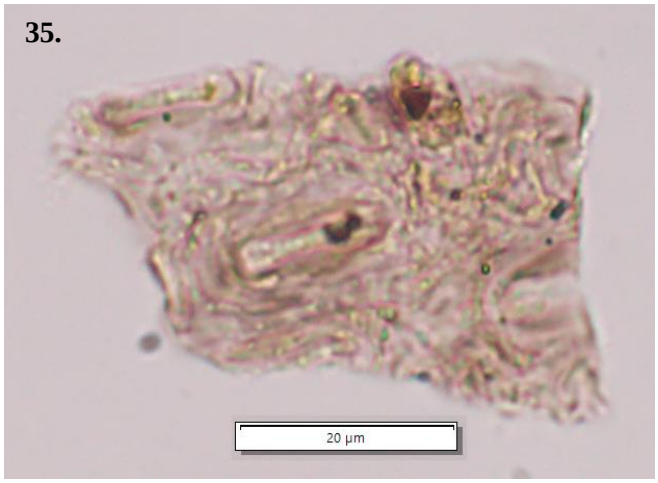






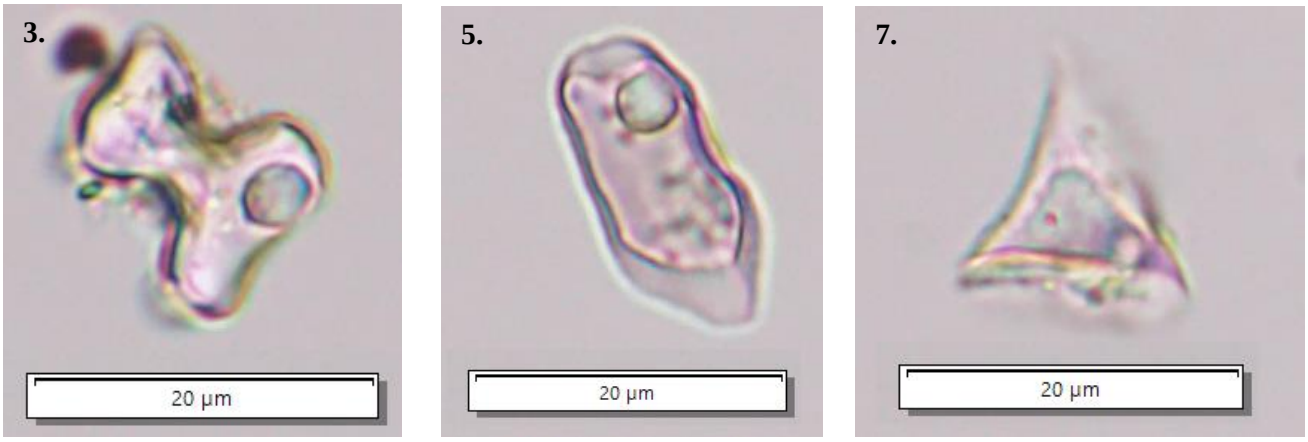




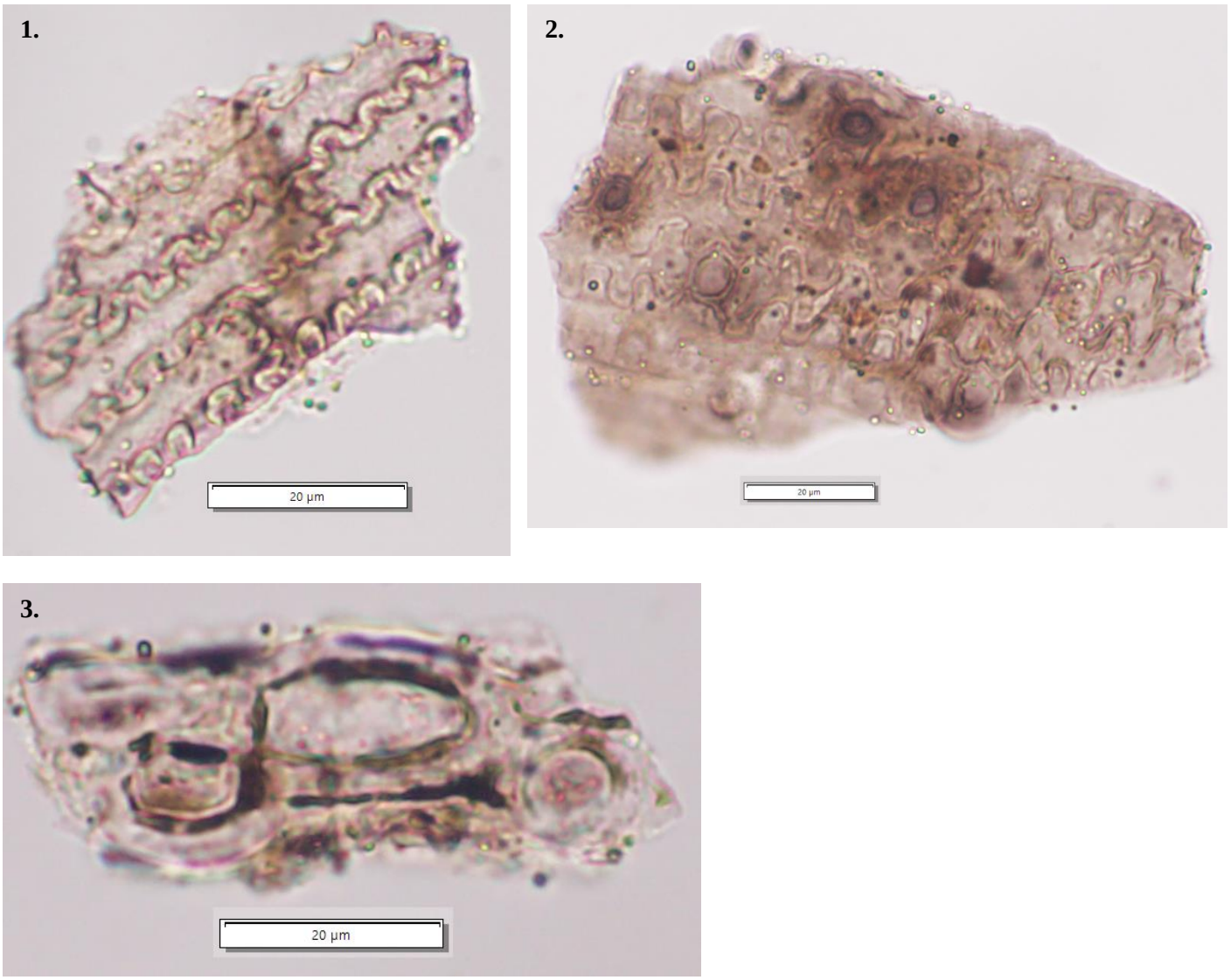




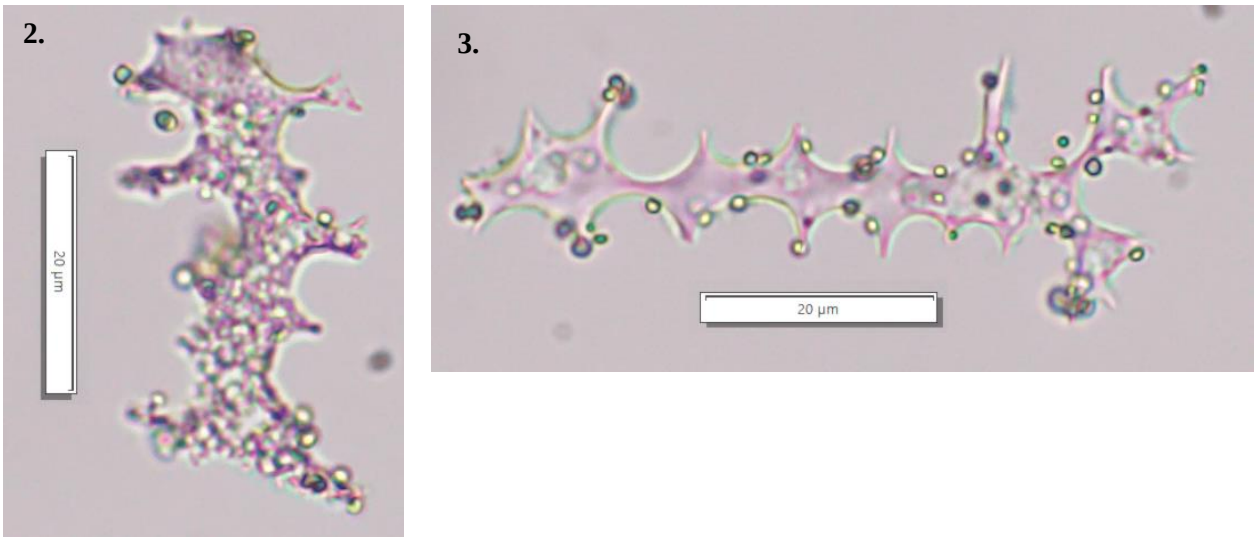
Ryc. 20 Obiekt 3 próba 5, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_3_5.
Fig. 20 Feature 3 sample 5: the photo number corresponds to the phytolith number in the table Ka4_2025_3_5.



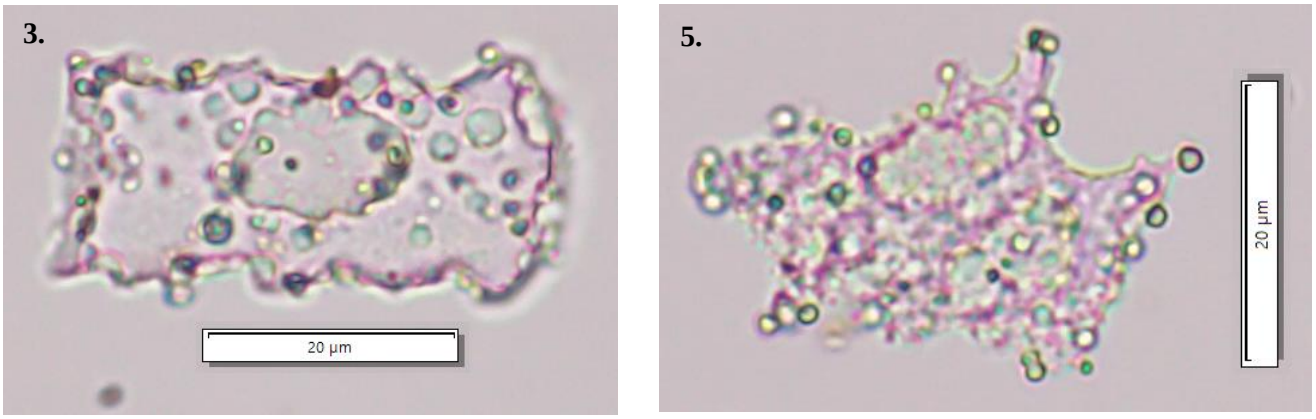
Ryc. 21 Obiekt 3 próba 7, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_3_7.
Fig. 21 Feature 3 sample 7: the photo number corresponds to the phytolith number in the table Ka4_2025_3_7.



Ryc. 22 Obiekt 3 próba 8, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_3_8.
Fig. 22 Feature 3 sample 8: the photo number corresponds to the phytolith number in the table Ka4_2025_3_8.



Ryc. 23 Obiekt 3 próba 9, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_3_9.
Fig. 23 Feature 3 sample 9: the photo number corresponds to the phytolith number in the table Ka4_2025_3_9.

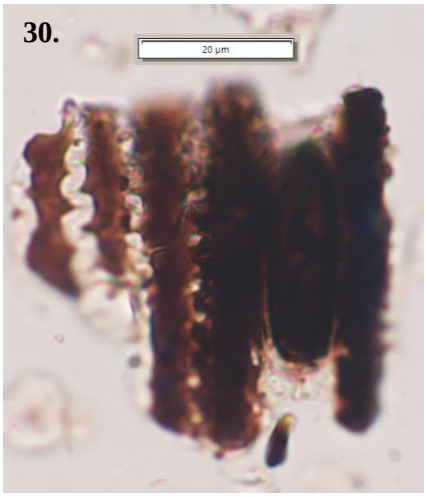


Ryc. 24 Obiekt 3 próba 10, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_3_10.
Fig. 24 Feature 3 sample 10: the photo number corresponds to the phytolith number in the table Ka4_2025_3_10.

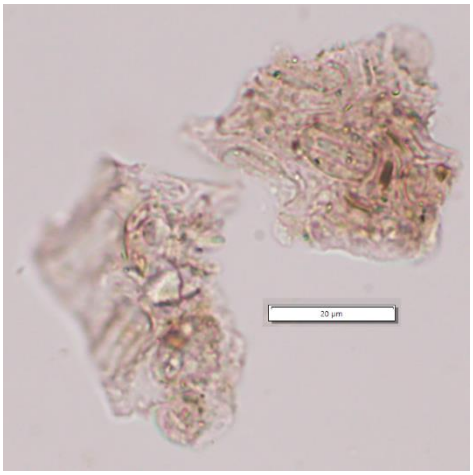


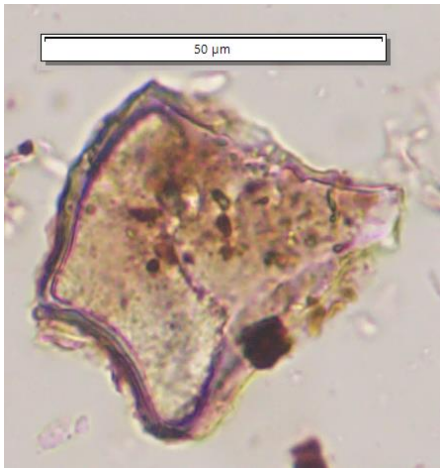


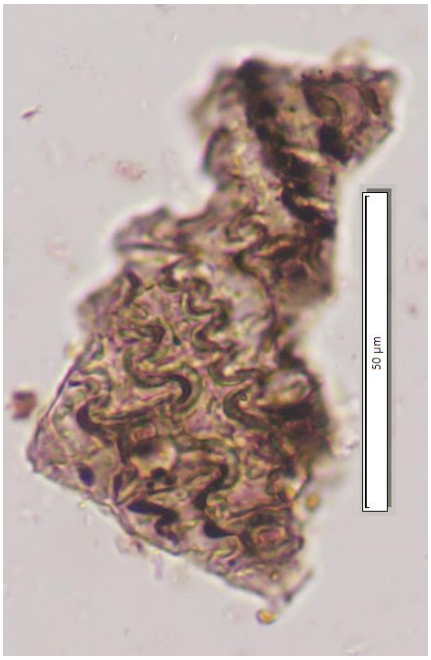














OBIEKT/FEATURE 24

Ka4_2025_24_1

Sample no	Identifications

Ka4_2025_24_1_1	MULTICELL
Ka4_2025_24_1_2	Tracheary

Ka4_2025_24_1_3	Rondel

Ka4_2025_24_2

Sample no	Identifications
Ka4_2025_24_2_1	Elongate sinuate

Ka4_2025_24_2_4	Saddle
Ka4_2025_24_2_5	Crenate
Ka4_2025_24_2_6	Rondel

Ka4_2025_24_2_7	Bulliform flabellate
Ka4_2025_24_2_8	Papillate

Ka4_2025_24_3

Sample no	Identifications
Ka4_2025_24_3_1	Crenate
Ka4_2025_24_3_2	Cross
Ka4_2025_24_3_3	Bilobate
Ka4_2025_24_3_4	Bilobate
Ka4_2025_24_3_6	Saddle
Ka4_2025_24_3_7	Crenate
Ka4_2025_24_3_8	Saddle

Ka4_2025_24_3_11	Rondel
Ka4_2025_24_3_13	Bulliform flabellate
Ka4_2025_24_3_14	Bulliform flabellate
Ka4_2025_24_3_15	Bilobate
Ka4_2025_24_3_17	Bulliform flabellate

Ka4_2025_24_3_18	Bulliform flabellate
Ka4_2025_24_3_19	Elongate dendritic
Ka4_2025_24_3_20	Tracheary
Ka4_2025_24_3_22	Elongate sinuate
Ka4_2025_24_3_23	WM
Ka4_2025_24_3_24	WM

Ka4_2025_24_4

Sample no	Identifications
Ka4_2025_24_4_1	Crenate
Ka4_2025_24_4_2	Bulliform flabellate

Ka4_2025_24_4_4	Cross
Ka4_2025_24_4_6	Bulliform flabellate
Ka4_2025_24_4_7	Bulliform flabellate

Ka4_2025_24_4_8	Rondel Tall
Ka4_2025_24_4_9	Elongate sinuate
Ka4_2025_24_4_10	WM

Ka4_2025_24_5

Sample no	Identifications
Ka4_2025_24_5_1	MULTICELL
Ka4_2025_24_5_2	Spheroid
Ka4_2025_24_5_3	Crenate
Ka4_2025_24_5_3	Cross
Ka4_2025_24_5_4	Spheroid echinate?

Ka4_2025_24_5_5	Elongate dendritic
Ka4_2025_24_5_6	Elongate dendritic
Ka4_2025_24_5_7	Oblong
Ka4_2025_24_5_8	Tracheary
Ka4_2025_24_5_9	Crenate
Ka4_2025_24_5_10	MULTICELL

Ka4_2025_24_5_11	Elongate dendritic
Ka4_2025_24_5_12	Ovate Ornate?
Ka4_2025_24_5_13	MULTICELL
Ka4_2025_24_5_14	Elongate dendritic
Ka4_2025_24_5_16	Tracheary
Ka4_2025_24_5_17	Cross
Ka4_2025_24_5_18	Tracheary

Ka4_2025_24_6

Sample no	Identifications
Ka4_2025_24_6_1	Crenate
Ka4_2025_24_6_2	MULTICELL
Ka4_2025_24_6_3	MULTICELL
Ka4_2025_24_6_4	MULTICELL
Ka4_2025_24_6_5	MULTICELL
Ka4_2025_24_6_6	MULTICELL
Ka4_2025_24_6_7	Indterminate
Ka4_2025_24_6_8	MULTICELL
Ka4_2025_24_6_9	Elongate dendritic

Ka4_2025_24_6_10	MULTICELL
Ka4_2025_24_6_11	MULTICELL
Ka4_2025_24_6_12	MULTICELL
Ka4_2025_24_6_13	MULTICELL
Ka4_2025_24_6_14	Elongate dendritic
Ka4_2025_24_6_15	MULTICELL
Ka4_2025_24_6_16	MULTICELL
Ka4_2025_24_6_17	MULTICELL
Ka4_2025_24_6_18	Bulliform flabellate
Ka4_2025_24_6_19	MULTICELL

Ka4_2025_24_6_21	MULTICELL
Ka4_2025_24_6_22	MULTICELL
Ka4_2025_24_6_24	MULTICELL
Ka4_2025_24_6_25	MULTICELL
Ka4_2025_24_6_26	Cross
Ka4_2025_24_6_27	WM
Ka4_2025_24_6_28	MULTICELL
Ka4_2025_24_6_29	MULTICELL
Ka4_2025_24_6_30	MULTICELL
Ka4_2025_24_6_31	Bulliform flabellate
Ka4_2025_24_6_32	MULTICELL

Ka4_2025_24_7

Sample no	Identifications
Ka4_2025_24_7_1	WM
Ka4_2025_24_7_2	MULTICELL

Ka4_2025_24_7_3	MULTICELL
Ka4_2025_24_7_4	MULTICELL
Ka4_2025_24_7_5	Bulliform flabellate

Ka4_2025_24_7_6	MULTICELL
Ka4_2025_24_7_7	MULTICELL
Ka4_2025_24_7_8	MULTICELL
Ka4_2025_24_7_9	Rondel Tall

Ka4_2025_24_7_10	Cross
Ka4_2025_24_7_11	MULTICELL
Ka4_2025_24_7_12	MULTICELL
Ka4_2025_24_7_13	Bulliform flabellate
Ka4_2025_24_7_14	MULTICELL
Ka4_2025_24_7_15	MULTICELL
Ka4_2025_24_7_16	Indeterminate
Ka4_2025_24_7_17	MULTICELL
Ka4_2025_24_7_18	MULTICELL
Ka4_2025_24_7_19	MULTICELL
Ka4_2025_24_7_20	Bilobate
Ka4_2025_24_7_21	MULTICELL
Ka4_2025_24_7_22	MULTICELL
Ka4_2025_24_7_23	MULTICELL
Ka4_2025_24_7_24	MULTICELL
Ka4_2025_24_7_25	MULTICELL
Ka4_2025_24_7_26	MULTICELL
Ka4_2025_24_7_27	Oblong
Ka4_2025_24_7_28	MULTICELL
Ka4_2025_24_7_29	MULTICELL
Ka4_2025_24_7_30	MULTICELL
Ka4_2025_24_7_31	MULTICELL
Ka4_2025_24_7_32	MULTICELL
Ka4_2025_24_7_33	Oblong
Ka4_2025_24_7_34	MULTICELL
Ka4_2025_24_7_35	MULTICELL
Ka4_2025_24_7_36	Ovate Ornate?
Ka4_2025_24_7_37	Bulliform flabellate

Ka4_2025_24_8

Sample no	Identifications
Ka4_2025_24_8_2	MULTICELL
Ka4_2025_24_8_3	Cross
Ka4_2025_24_8_4	Sclereids
Ka4_2025_24_8_5	MULTICELL
Ka4_2025_24_8_6	Indeterminate
Ka4_2025_24_8_7	MULTICELL
Ka4_2025_24_8_8	Spheroid
Ka4_2025_24_8_9	Elongate dendritic
Ka4_2025_24_8_10	MULTICELL
Ka4_2025_24_8_11	MULTICELL
Ka4_2025_24_8_12	Indeterminate
Ka4_2025_24_8_13	MULTICELL
Ka4_2025_24_8_14	Cross
Ka4_2025_24_8_15	Acute bulbosus
Ka4_2025_24_8_16	Saddle
Ka4_2025_24_8_17	MULTICELL
Ka4_2025_24_8_18	MULTICELL
Ka4_2025_24_8_19	Tracheary
Ka4_2025_24_8_20	MULTICELL
Ka4_2025_24_8_21	MULTICELL
Ka4_2025_24_8_22	MULTICELL
Ka4_2025_24_8_23	WM
Ka4_2025_24_8_24	Acute bulbosus
Ka4_2025_24_8_26	MULTICELL
Ka4_2025_24_8_27	Bulliform flabellate
Ka4_2025_24_8_28	MULTICELL
Ka4_2025_24_8_29	MULTICELL
Ka4_2025_24_8_30	MULTICELL
Ka4_2025_24_8_31	Spheroid
Ka4_2025_24_8_32	Polylobate
Ka4_2025_24_8_34	MULTICELL
Ka4_2025_24_8_35	Oblong
Ka4_2025_24_8_36	Indeterminate
Ka4_2025_24_8_37	MULTICELL
Ka4_2025_24_8_38	MULTICELL
Ka4_2025_24_8_39	MULTICELL
Ka4_2025_24_8_40	MULTICELL
Ka4_2025_24_8_41	MULTICELL
Ka4_2025_24_8_42	Rondel
Ka4_2025_24_8_43	Oblong
Ka4_2025_24_8_44	Bulliform flabellate
Ka4_2025_24_8_45	MULTICELL
Ka4_2025_24_8_46	Bulliform flabellate

Ka4_2025_24_9

Sample no	Identifications
Ka4_2025_24_9_1	Indeterminate
Ka4_2025_24_9_2	MULTICELL
Ka4_2025_24_9_3	MULTICELL
Ka4_2025_24_9_4	MULTICELL
Ka4_2025_24_9_5	Acute bulbosus
Ka4_2025_24_9_6	MULTICELL
Ka4_2025_24_9_7	MULTICELL
Ka4_2025_24_9_8	MULTICELL
Ka4_2025_24_9_9	MULTICELL
Ka4_2025_24_9_10	Bilobate
Ka4_2025_24_9_11	MULTICELL
Ka4_2025_24_9_12	MULTICELL
Ka4_2025_24_9_13	MULTICELL
Ka4_2025_24_9_14	MULTICELL
Ka4_2025_24_9_15	MULTICELL
Ka4_2025_24_9_16	MULTICELL
Ka4_2025_24_9_17	MULTICELL
Ka4_2025_24_9_18	Elongate dendritic
Ka4_2025_24_9_19	MULTICELL
Ka4_2025_24_9_20	MULTICELL
Ka4_2025_24_9_22	MULTICELL
Ka4_2025_24_9_23	MULTICELL
Ka4_2025_24_9_25	Elongate dendritic
Ka4_2025_24_9_26	MULTICELL
Ka4_2025_24_9_27	MULTICELL
Ka4_2025_24_9_28	MULTICELL
Ka4_2025_24_9_29	MULTICELL
Ka4_2025_24_9_30	MULTICELL
Ka4_2025_24_9_31	MULTICELL
Ka4_2025_24_9_32	MULTICELL
Ka4_2025_24_9_33	MULTICELL
Ka4_2025_24_9_34	Papillate
Ka4_2025_24_9_35	Spheroid
Ka4_2025_24_9_37	MULTICELL
Ka4_2025_24_9_38	MULTICELL
Ka4_2025_24_9_39	MULTICELL
Ka4_2025_24_9_40	Elongate dendritic
Ka4_2025_24_9_41	Ovate Ornate?
Ka4_2025_24_9_42	MULTICELL
Ka4_2025_24_9_43	MULTICELL
Ka4_2025_24_9_44	Elongate entire
Ka4_2025_24_9_45	MULTICELL
Ka4_2025_24_9_46	MULTICELL
Ka4_2025_24_9_47	MULTICELL
Ka4_2025_24_9_48	MULTICELL
Ka4_2025_24_9_49	Cross
Ka4_2025_24_9_51	MULTICELL
Ka4_2025_24_9_52	Elongate dendritic
Ka4_2025_24_9_53	Spheroid
Ka4_2025_24_9_55	MULTICELL
Ka4_2025_24_9_56	MULTICELL
Ka4_2025_24_9_57	Bulliform flabellate
Ka4_2025_24_9_58	Bilobate

Ka4_2025_24_10

Sample no	Identifications
Ka4_2025_24_10_1	Elongate dendritic
Ka4_2025_24_10_2	Ameboid
Ka4_2025_24_10_3	Bilobate
Ka4_2025_24_10_4	Elongate dentate
Ka4_2025_24_10_5	Polygonal
Ka4_2025_24_10_7	Cross
Ka4_2025_24_10_8	MULTICELL
Ka4_2025_24_10_10	Elongate dendritic
Ka4_2025_24_10_12	Tracheary pitted
Ka4_2025_24_10_13	Bulliform flabellate
Ka4_2025_24_10_14	Cross
Ka4_2025_24_10_15	Elongate dendritic
Ka4_2025_24_10_16	MULTICELL
Ka4_2025_24_10_17	Elongate dendritic
Ka4_2025_24_10_18	MULTICELL
Ka4_2025_24_10_20	Bulliform flabellate
Ka4_2025_24_10_21	Ovate Ornate?

Ka4_2025_24_10_22	Indeterminate
Ka4_2025_24_10_23	MULTICELL
Ka4_2025_24_10_24	Bulliform flabellate

Ka4_2025_24_11

Sample no	Identifications
Ka4_2025_24_11_1	Cross
Ka4_2025_24_11_2	Ameboid
Ka4_2025_24_11_3	MULTICELL
Ka4_2025_24_11_4	Circular
Ka4_2025_24_11_6	MULTICELL
Ka4_2025_24_11_7	Tracheary
Ka4_2025_24_11_8	Bulliform flabellate

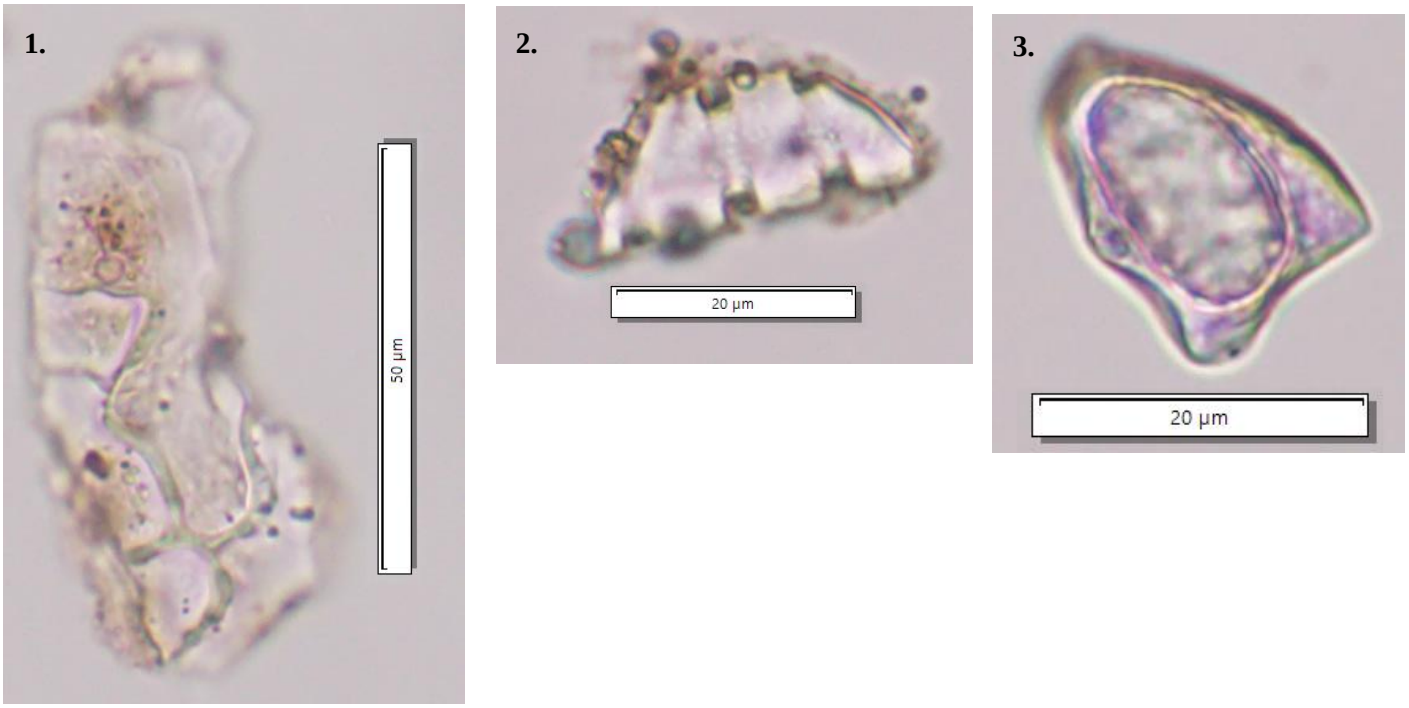
Ka4_2025_24_15

Sample no	Identifications
Ka4_2025_24_15_1	MULTICELL
Ka4_2025_24_15_2	MULTICELL
Ka4_2025_24_15_3	Bilobate
Ka4_2025_24_15_4	MULTICELL
Ka4_2025_24_15_5	MULTICELL
Ka4_2025_24_15_6	MULTICELL
Ka4_2025_24_15_7	Rondel tall
Ka4_2025_24_15_8	MULTICELL
Ka4_2025_24_15_9	Bilobate
Ka4_2025_24_15_10	MULTICELL

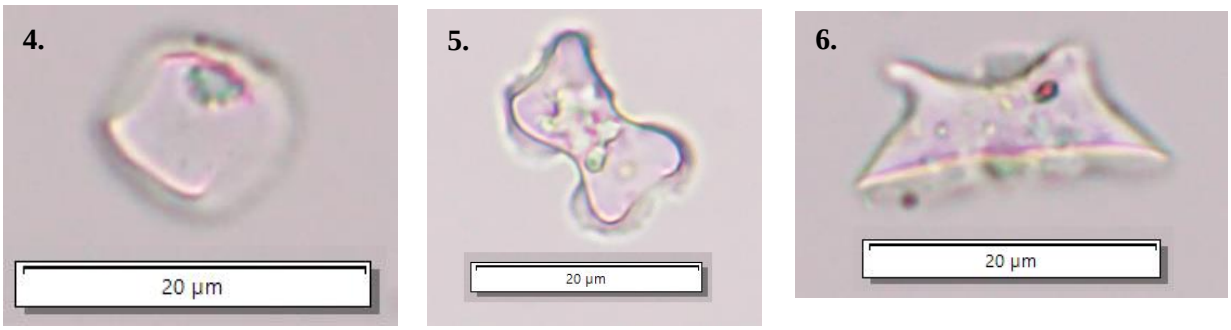
Ka4_2025_24_20

Sample no	Identifications
Ka4_2025_24_20_1	Bulliform flabellate
Ka4_2025_24_20_2	Bulliform flabellate
Ka4_2025_24_20_3	Cross
Ka4_2025_24_20_4	MULTICELL
Ka4_2025_24_20_5	Cross
Ka4_2025_24_20_6	MULTICELL
Ka4_2025_24_20_7	MULTICELL
Ka4_2025_24_20_8	Bilobate
Ka4_2025_24_20_9	Bulliform flabellate

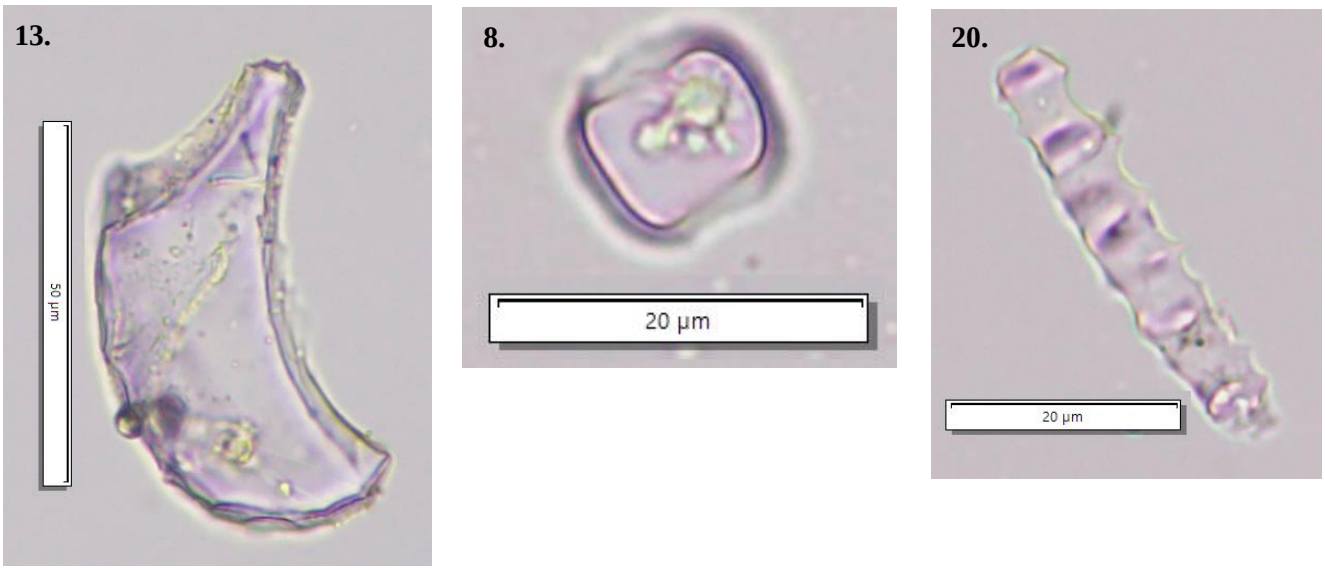
Ryc. 25 Obiekt 24 próba 1, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_24_1.
Fig. 25 Feature 24 sample 1: the photo number corresponds to the phytolith number in the table Ka4_2025_24_1.



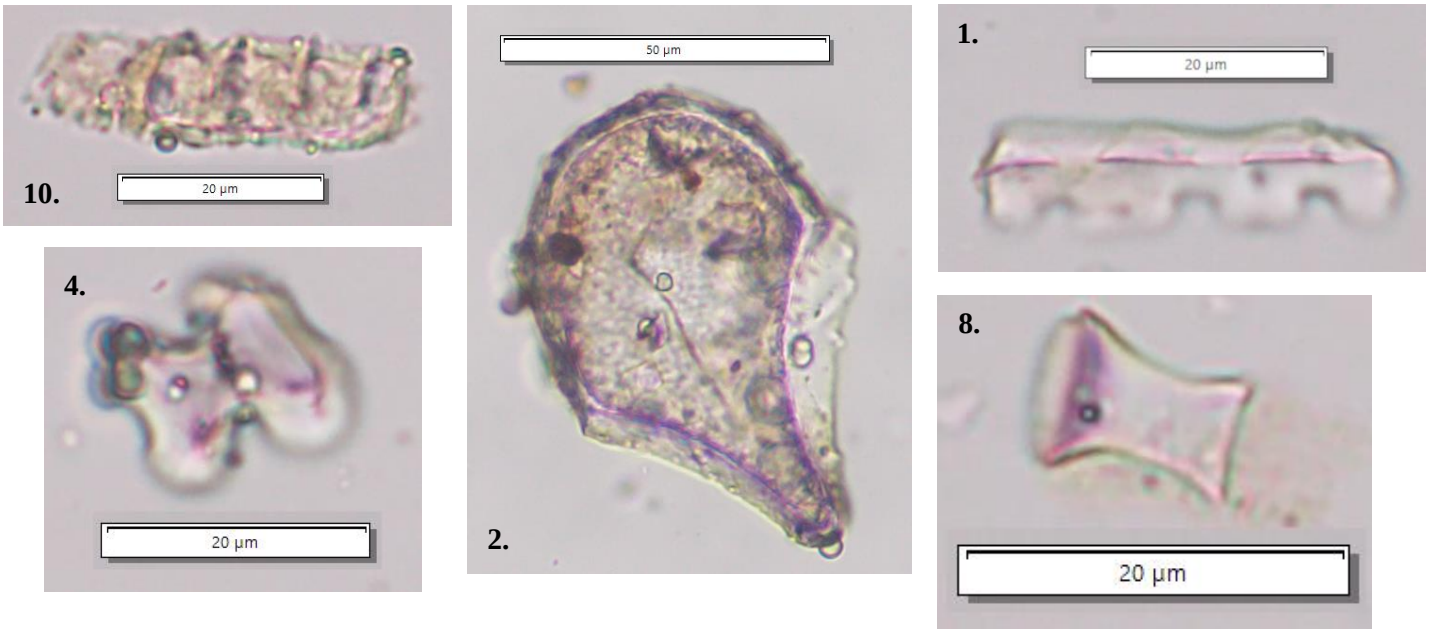
Ryc. 26 Obiekt 24 próba 2, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_24_2.
Fig. 26 Feature 24 sample 2: the photo number corresponds to the phytolith number in the table Ka4_2025_24_2.



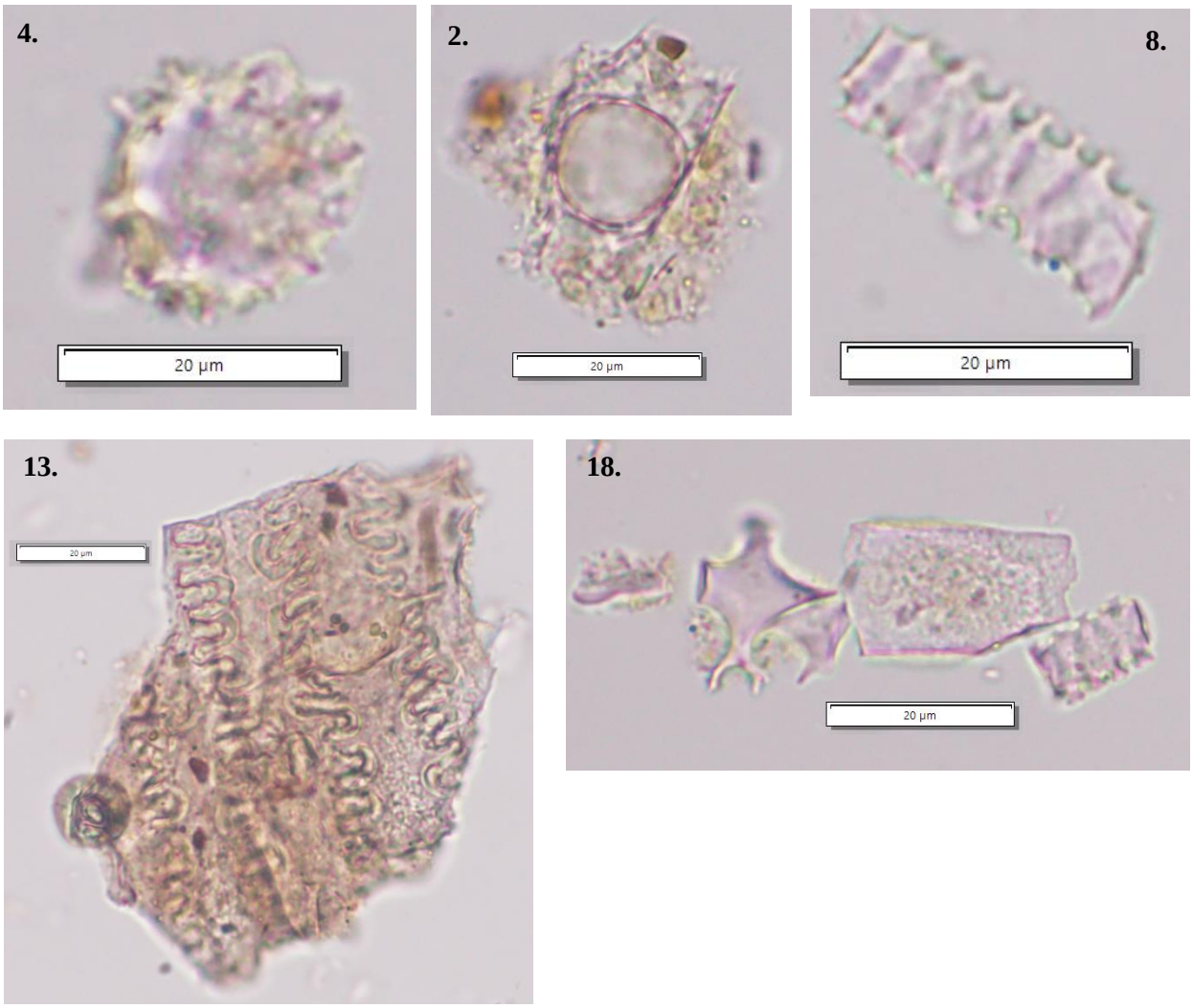
Ryc. 27 Obiekt 24 próba 3, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_24_3.
Fig. 27 Feature 24 sample 3: the photo number corresponds to the phytolith number in the table Ka4_2025_24_3.



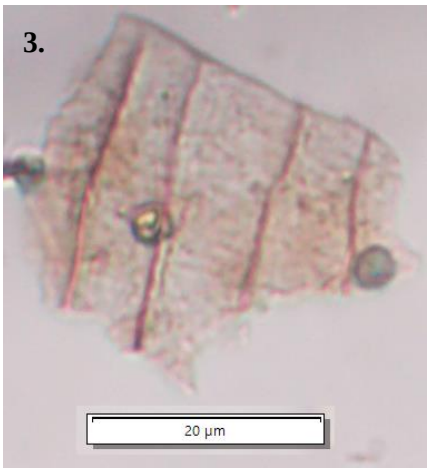
Ryc. 28 Obiekt 24 próba 4, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_24_4.
Fig. 28 Feature 24 sample 4: the photo number corresponds to the phytolith number in the table Ka4_2025_24_4.



Ryc. 29 Obiekt 24 próba 5, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_24_5.
Fig. 29 Feature 24 sample 5: the photo number corresponds to the phytolith number in the table Ka4_2025_24_5.

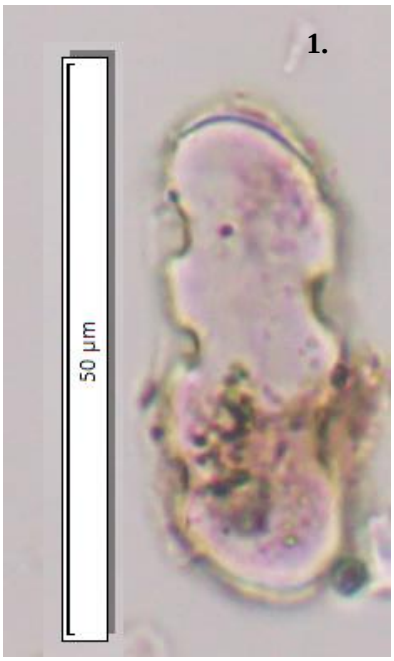


Ryc. 30 Obiekt 24 próba 6, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_24_6.
Fig. 30 Feature 24 sample 6: the photo number corresponds to the phytolith number in the table Ka4_2025_24_6.



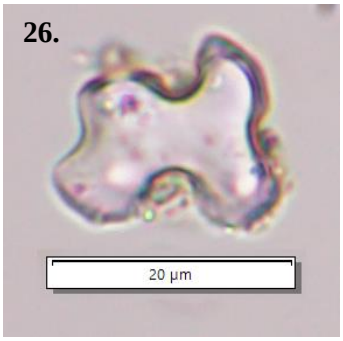


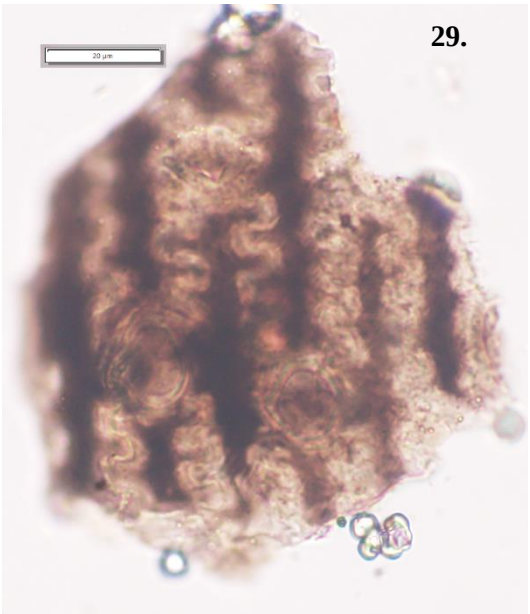


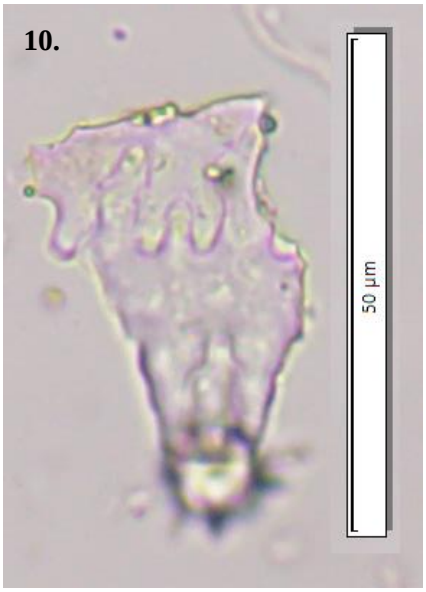




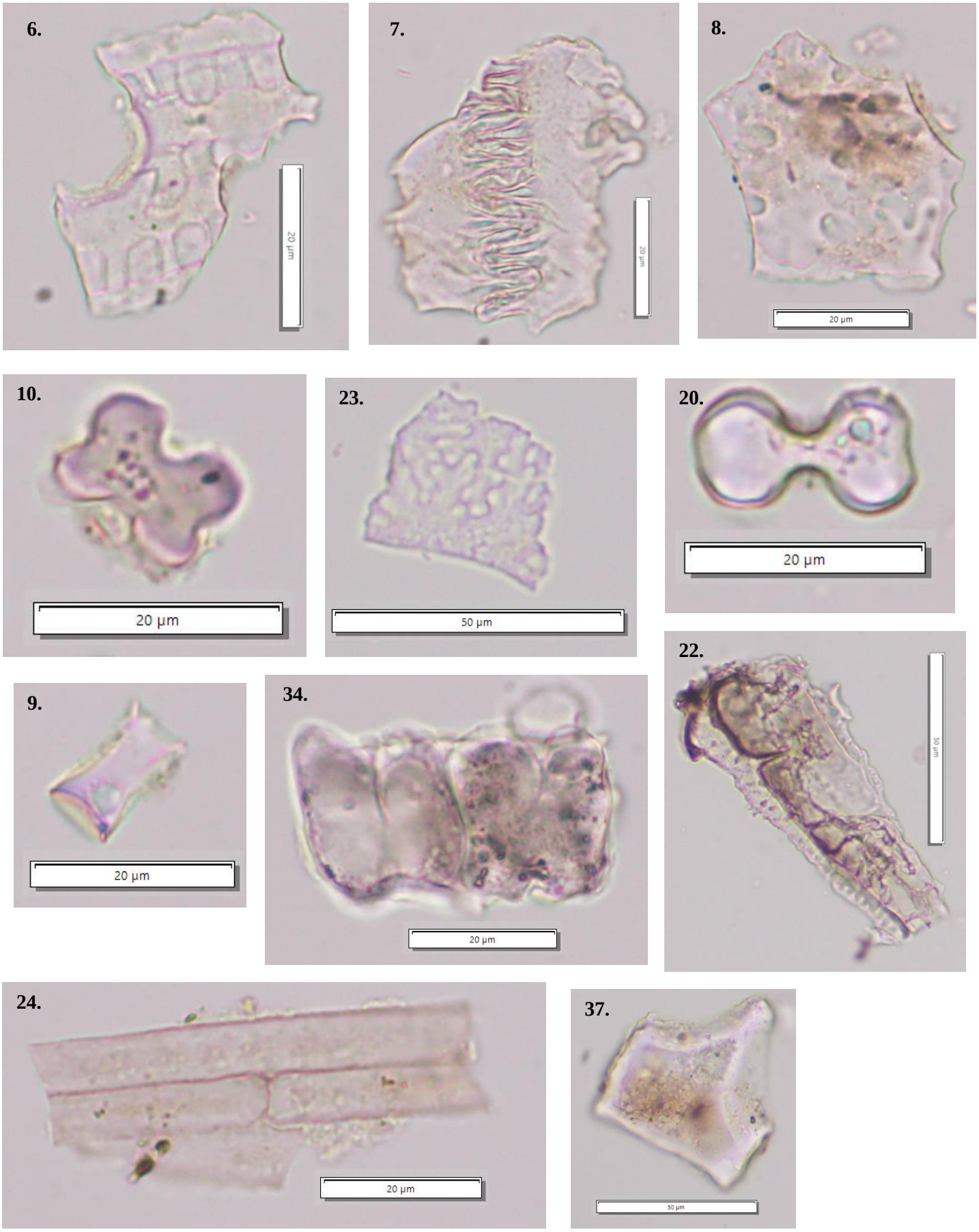








Ryc. 31 Obiekt 24 próba 7, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_24_7.
Fig. 31 Feature 24 sample 7: the photo number corresponds to the phytolith number in the table Ka4_2025_24_7.



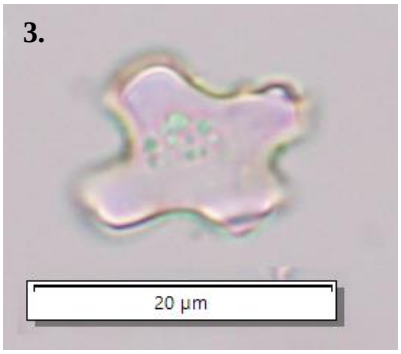
Ryc. 32 Obiekt 24 próba 8, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_24_8.
Fig. 32 Feature 24 sample 8: the photo number corresponds to the phytolith number in the table Ka4_2025_24_8.



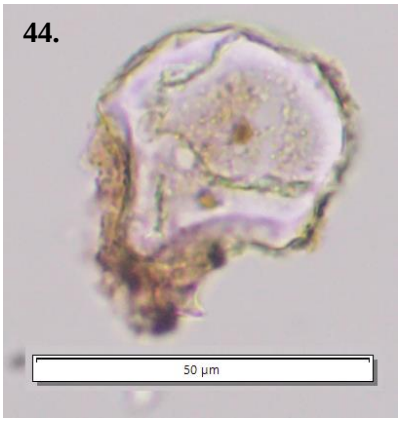




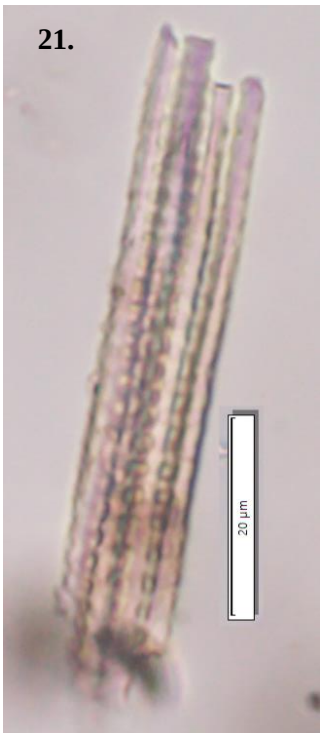


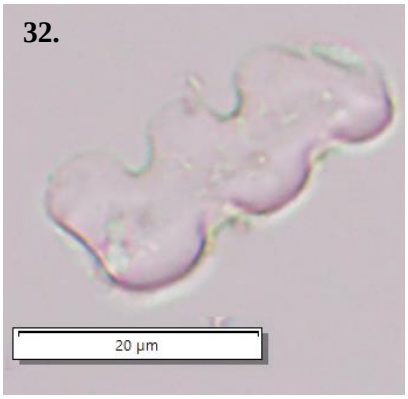






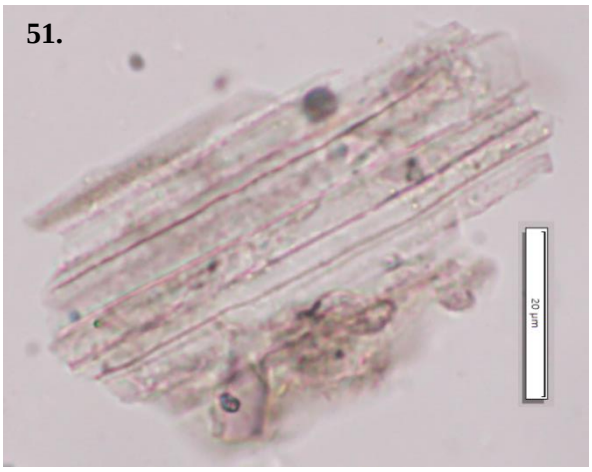




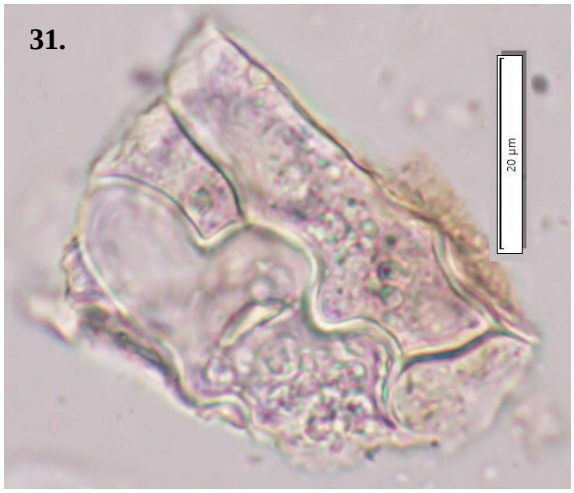


Ryc. 33 Obiekt 24 próba 9, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_24_9.
Fig. 33 Feature 24 sample 9: the photo number corresponds to the phytolith number in the table Ka4_2025_24_9.









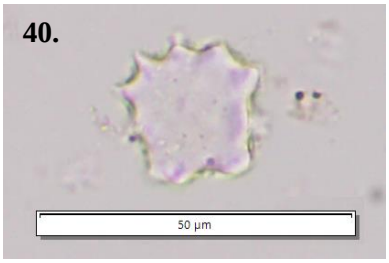




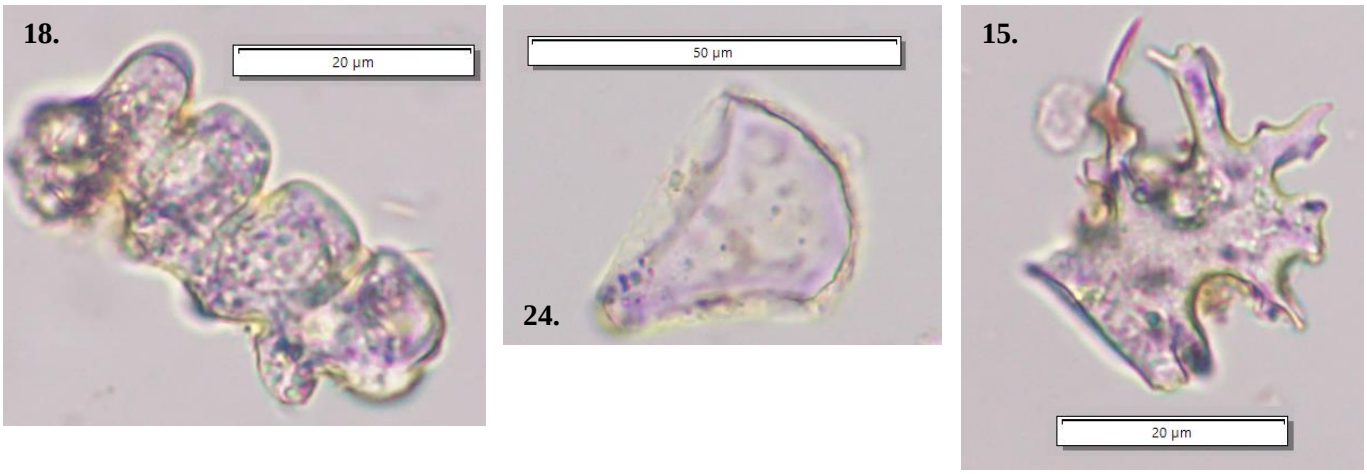




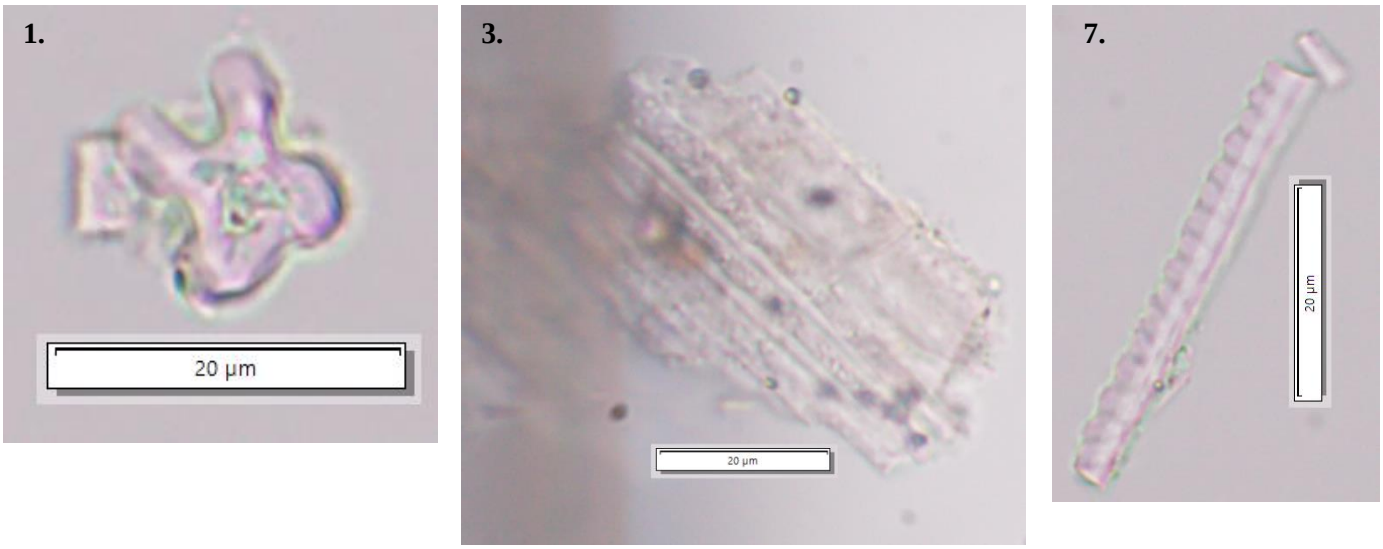




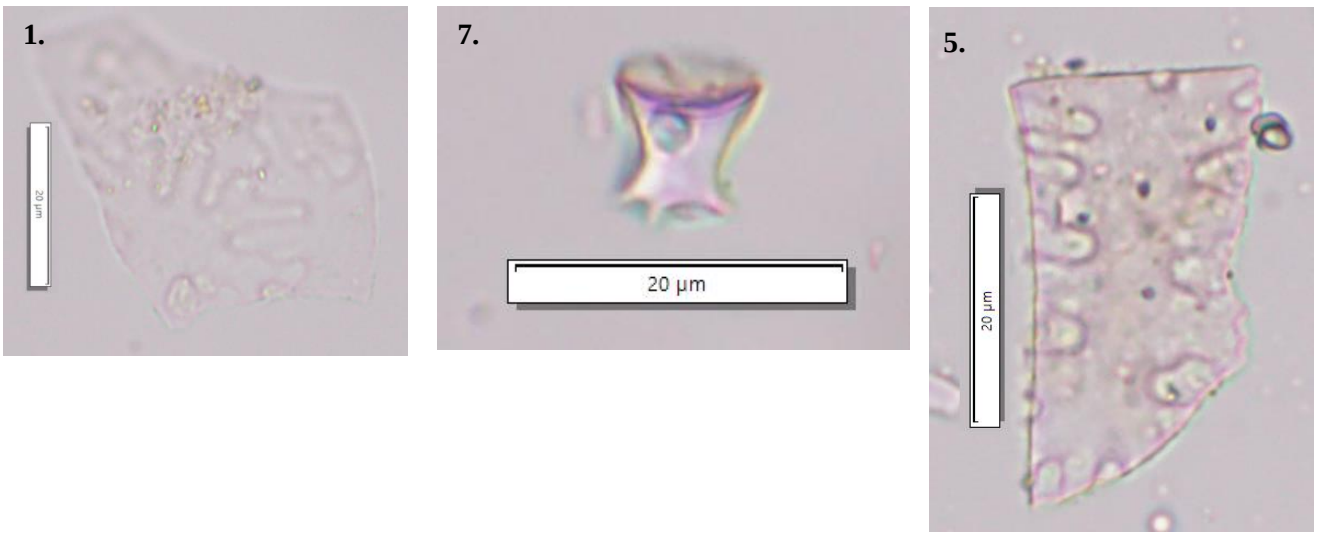
Ryc. 34 Obiekt 24 próba 10, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_24_10.
Fig. 34 Feature 24 sample 10: the photo number corresponds to the phytolith number in the table Ka4_2025_24_10.



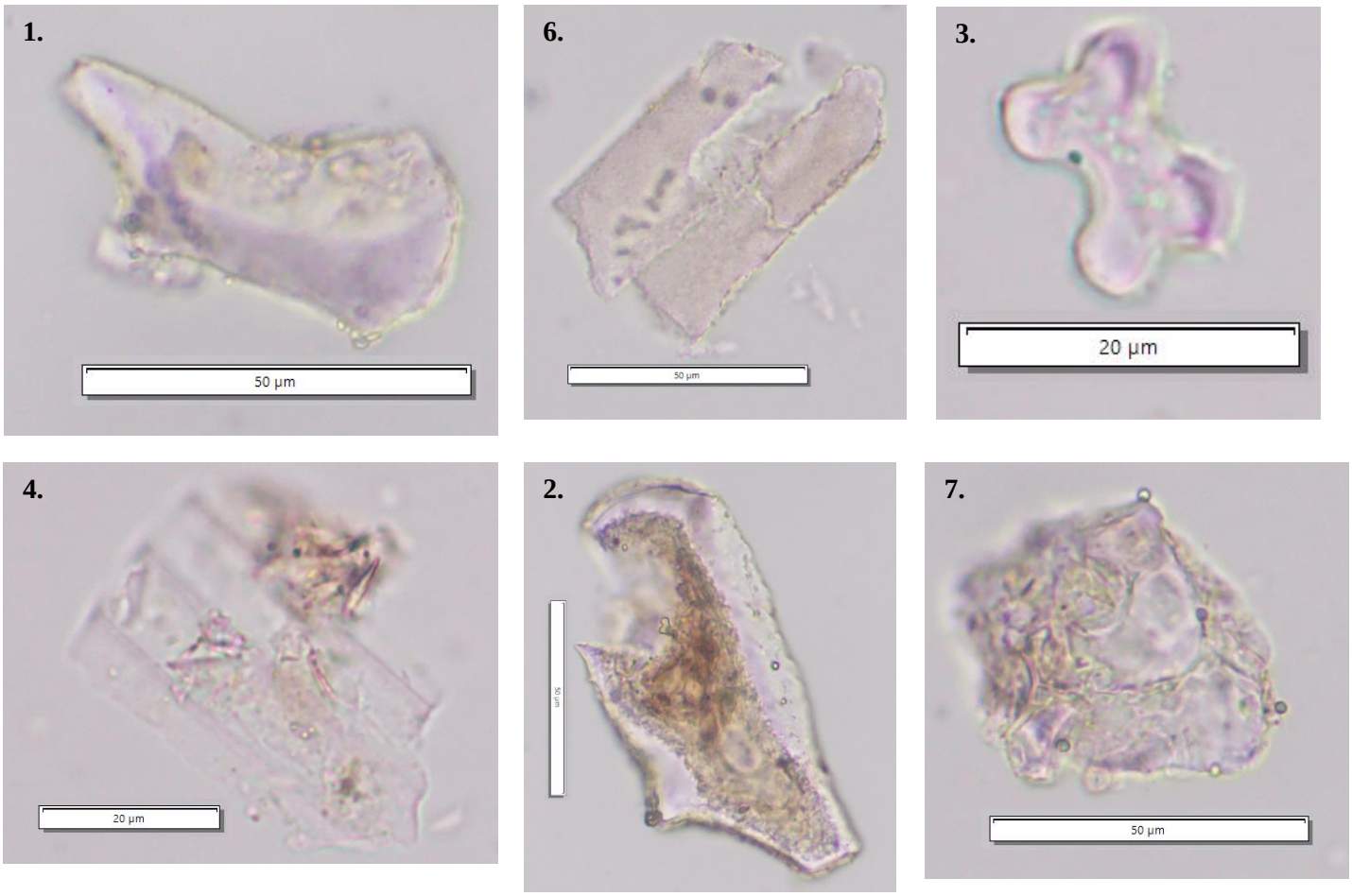
Ryc. 35 Obiekt 24 próba 11, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_24_11.
Fig. 35 Feature 24 sample 11: the photo number corresponds to the phytolith number in the table Ka4_2025_24_11.



Ryc. 36 Obiekt 24 próba 15, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_24_15.
Fig. 36 Feature 24 sample 15: the photo number corresponds to the phytolith number in the table Ka4_2025_24_15.



Ryc. 37 Obiekt 24 próba 20, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_24_20.
Fig. 37 Feature 24 sample 20: the photo number corresponds to the phytolith number in the table Ka4_2025_24_20.



OBIEKT/FEATURE 25

Ka4_2025_25_1

Sample no	Identifications
Ka4_2025_25_1_1	Tracheary
Ka4_2025_25_1_2	MULTICELL
Ka4_2025_25_1_3	Bulliform flabellate
Ka4_2025_25_1_4	Bulliform flabellate
Ka4_2025_25_1_5	Tracheary
Ka4_2025_25_1_6	Tracheary
Ka4_2025_25_1_7	Bulliform flabellate
Ka4_2025_25_1_8	Bulliform flabellate
Ka4_2025_25_1_9	Bulliform flabellate
Ka4_2025_25_1_10	Tracheary
Ka4_2025_25_1_11	Bulliform flabellate
Ka4_2025_25_1_12	Blocky
Ka4_2025_25_1_13	Bulliform flabellate
Ka4_2025_25_1_14	MULTICELL

Ka4_2025_25_2

Sample no	Identifications
Ka4_2025_25_2_1	MULTICELL
Ka4_2025_25_2_2	MULTICELL
Ka4_2025_25_2_3	Tracheary
Ka4_2025_25_2_4	MULTICELL
Ka4_2025_25_2_5	MULTICELL
Ka4_2025_25_2_6	MULTICELL
Ka4_2025_25_2_7	MULTICELL
Ka4_2025_25_2_8	Bulliform flabellate
Ka4_2025_25_2_9	Bulliform flabellate
Ka4_2025_25_2_10	Bulliform flabellate
Ka4_2025_25_2_11	MULTICELL
Ka4_2025_25_2_12	MULTICELL
Ka4_2025_25_2_13	Bulliform flabellate
Ka4_2025_25_2_14	Indeterminate

Ka4_2025_25_3

Sample no	Identifications
Ka4_2025_25_3_1	Tracheary
Ka4_2025_25_3_2	MULTICELL
Ka4_2025_25_3_3	MULTICELL
Ka4_2025_25_3_4	MULTICELL
Ka4_2025_25_3_5	Bulliform flabellate
Ka4_2025_25_3_6	Bulliform flabellate
Ka4_2025_25_3_7	MULTICELL
Ka4_2025_25_3_8	Bulliform flabellate
Ka4_2025_25_3_9	Tracheary
Ka4_2025_25_3_10	MULTICELL
Ka4_2025_25_3_11	Tracheary
Ka4_2025_25_3_12	MULTICELL
Ka4_2025_25_3_13	MULTICELL
Ka4_2025_25_3_14	Bulliform flabellate
Ka4_2025_25_3_15	MULTICELL
Ka4_2025_25_3_16	Bulliform flabellate
Ka4_2025_25_3_17	Bulliform flabellate
Ka4_2025_25_3_18	MULTICELL
Ka4_2025_25_3_19	Bulliform flabellate
Ka4_2025_25_3_20	MULTICELL
Ka4_2025_25_3_21	Rondell tall
Ka4_2025_25_3_22	MULTICELL
Ka4_2025_25_3_23	Bulliform flabellate
Ka4_2025_25_3_24	Bulliform flabellate
Ka4_2025_25_3_25	Bulliform flabellate
Ka4_2025_25_3_26	Bulliform flabellate
Ka4_2025_25_3_27	Bulliform flabellate
Ka4_2025_25_3_28	Bulliform flabellate
Ka4_2025_25_3_29	Bulliform flabellate
Ka4_2025_25_3_30	MULTICELL
Ka4_2025_25_3_31	Bulliform flabellate

Ka4_2025_25_4

Sample no	Identifications
Ka4_2025_25_4_1	Tracheary
Ka4_2025_25_4_2	Blocky
Ka4_2025_25_4_4	Tracheary
Ka4_2025_25_4_5	Bulliform flabellate
Ka4_2025_25_4_6	Bulliform flabellate
Ka4_2025_25_4_7	MULTICELL
Ka4_2025_25_4_8	Bulliform flabellate
Ka4_2025_25_4_9	Bulliform flabellate
Ka4_2025_25_4_10	Bulliform flabellate
Ka4_2025_25_4_11	Bulliform flabellate
Ka4_2025_25_4_12	Bulliform flabellate
Ka4_2025_25_4_13	Bulliform flabellate
Ka4_2025_25_4_14	Bulliform flabellate

Ka4_2025_25_5

Sample no	Identifications
Ka4_2025_25_5_1	Bulliform flabellate
Ka4_2025_25_5_2	Bulliform flabellate
Ka4_2025_25_5_3	WM
Ka4_2025_25_5_4	Bulliform flabellate
Ka4_2025_25_5_5	Bulliform flabellate
Ka4_2025_25_5_6	Bulliform flabellate
Ka4_2025_25_5_7	Bulliform flabellate
Ka4_2025_25_5_8	Bulliform flabellate
Ka4_2025_25_5_9	Bulliform flabellate
Ka4_2025_25_5_10	Cross
Ka4_2025_25_5_11	Bulliform flabellate
Ka4_2025_25_5_12	Bilobate

Ka4_2025_25_6

Sample no	Identifications
Ka4_2025_25_6_1	MULTICELL
Ka4_2025_25_6_2	Bulliform flabellate
Ka4_2025_25_6_3	MULTICELL
Ka4_2025_25_6_4	Crenate
Ka4_2025_25_6_5	Bulliform flabellate
Ka4_2025_25_6_6	Bulliform flabellate
Ka4_2025_25_6_7	Bulliform flabellate
Ka4_2025_25_6_8	Bulliform flabellate
Ka4_2025_25_6_9	Bulliform flabellate
Ka4_2025_25_6_10	Bulliform flabellate
Ka4_2025_25_6_11	Bulliform flabellate
Ka4_2025_25_6_12	Bulliform flabellate
Ka4_2025_25_6_13	Bulliform flabellate

Ka4_2025_25_7

Sample no	Identifications
Ka4_2025_25_7_1	Bulliform flabellate
Ka4_2025_25_7_2	Bulliform flabellate
Ka4_2025_25_7_3	Bulliform flabellate
Ka4_2025_25_7_4	Bilobate
Ka4_2025_25_7_5	Bulliform flabellate
Ka4_2025_25_7_6	Bilobate
Ka4_2025_25_7_7	Bulliform flabellate
Ka4_2025_25_7_8	Bulliform flabellate
Ka4_2025_25_7_9	Bulliform flabellate
Ka4_2025_25_7_10	Bulliform flabellate
Ka4_2025_25_7_11	Bulliform flabellate
Ka4_2025_25_7_12	Indeterminate
Ka4_2025_25_7_13	Bulliform flabellate
Ka4_2025_25_7_14	Bulliform flabellate
Ka4_2025_25_7_15	Bulliform flabellate
Ka4_2025_25_7_16	Bulliform flabellate
Ka4_2025_25_7_17	Bulliform flabellate
Ka4_2025_25_7_18	Bulliform flabellate
Ka4_2025_25_7_19	Bulliform flabellate
Ka4_2025_25_7_20	Bulliform flabellate
Ka4_2025_25_7_21	Bulliform flabellate
Ka4_2025_25_7_22	Bulliform flabellate
Ka4_2025_25_7_23	Bulliform flabellate
Ka4_2025_25_7_24	MULTICELL
Ka4_2025_25_7_25	Bulliform flabellate
Ka4_2025_25_7_26	Bulliform flabellate
Ka4_2025_25_7_27	Bulliform flabellate
Ka4_2025_25_7_28	Bulliform flabellate
Ka4_2025_25_7_29	Cross
Ka4_2025_25_7_30	Bulliform flabellate
Ka4_2025_25_7_31	Elongate sinuate
Ka4_2025_25_7_32	Bulliform flabellate

Ka4_2025_25_8

Sample no	Identifications
Ka4_2025_25_8_1	Bulliform flabellate
Ka4_2025_25_8_2	Rondel
Ka4_2025_25_8_3	WM
Ka4_2025_25_8_4	WM
Ka4_2025_25_8_5	WM
Ka4_2025_25_8_6	Bulliform flabellate
Ka4_2025_25_8_7	MULTICELL

Ka4_2025_25_10

Sample no	Identifications
Ka4_2025_25_10_1	Bulliform flabellate
Ka4_2025_25_10_2	Bulliform flabellate
Ka4_2025_25_10_3	Bulliform flabellate
Ka4_2025_25_10_4	Indeterminate
Ka4_2025_25_10_5	Indeterminate
Ka4_2025_25_10_6	Bulliform flabellate
Ka4_2025_25_10_7	Bulliform flabellate
Ka4_2025_25_10_8	MULTICELL

Ka4_2025_25_12

Sample no	Identifications
Ka4_2025_25_12_1	Bulliform flabellate
Ka4_2025_25_12_2	Bulliform flabellate
Ka4_2025_25_12_3	Crenate
Ka4_2025_25_12_4	Bulliform flabellate
Ka4_2025_25_12_5	Tracheary
Ka4_2025_25_12_6	Bulliform flabellate
Ka4_2025_25_12_7	Bulliform flabellate

Ka4_2025_25_13

Sample no	Identifications
Ka4_2025_25_13_1	Cross
Ka4_2025_25_13_2	Bulliform flabellate
Ka4_2025_25_13_3	Elongate dendritic
Ka4_2025_25_13_4	Bulliform flabellate
Ka4_2025_25_13_5	Bulliform flabellate
Ka4_2025_25_13_6	Bulliform flabellate
Ka4_2025_25_13_7	Bulliform flabellate
Ka4_2025_25_13_8	Bulliform flabellate
Ka4_2025_25_13_9	Bulliform flabellate
Ka4_2025_25_13_10	Bulliform flabellate

Ka4_2025_25_14

Sample no	Identifications
Ka4_2025_25_14_1	WM
Ka4_2025_25_14_2	Bulliform flabellate
Ka4_2025_25_14_3	Tracheary
Ka4_2025_25_14_4	Cross
Ka4_2025_25_14_5	Bulliform flabellate
Ka4_2025_25_14_6	Bulliform flabellate
Ka4_2025_25_14_7	Tracheary
Ka4_2025_25_14_8	MULTICELL
Ka4_2025_25_14_9	Bulliform flabellate
Ka4_2025_25_14_10	Bulliform flabellate
Ka4_2025_25_14_11	Bulliform flabellate
Ka4_2025_25_14_12	Bulliform flabellate
Ka4_2025_25_14_13	Bulliform flabellate
Ka4_2025_25_14_14	Bulliform flabellate

Ka4_2025_25_16

Sample no	Identifications
Ka4_2025_25_16_1	Bulliform flabellate
Ka4_2025_25_16_2	Crenate
Ka4_2025_25_16_3	Saddle
Ka4_2025_25_16_4	Bulliform flabellate

Ka4_2025_25_19

Sample no	Identifications
Ka4_2025_25_19_1	Bulliform flabellate
Ka4_2025_25_19_2	Bulliform flabellate
Ka4_2025_25_19_3	Rondel Tall
Ka4_2025_25_19_4	Bulliform flabellate
Ka4_2025_25_19_5	Rondel
Ka4_2025_25_19_6	Elongate dendritic
Ka4_2025_25_19_7	Blocky
Ka4_2025_25_19_8	Acute bulbosus
Ka4_2025_25_19_9	Bulliform flabellate
Ka4_2025_25_19_10	Elongate dendritic
Ka4_2025_25_19_11	Bulliform flabellate
Ka4_2025_25_19_12	Bilobate
Ka4_2025_25_19_13	Bulliform flabellate
Ka4_2025_25_19_14	Tracheary
Ka4_2025_25_19_15	Bulliform flabellate
Ka4_2025_25_19_16	Indeterminate

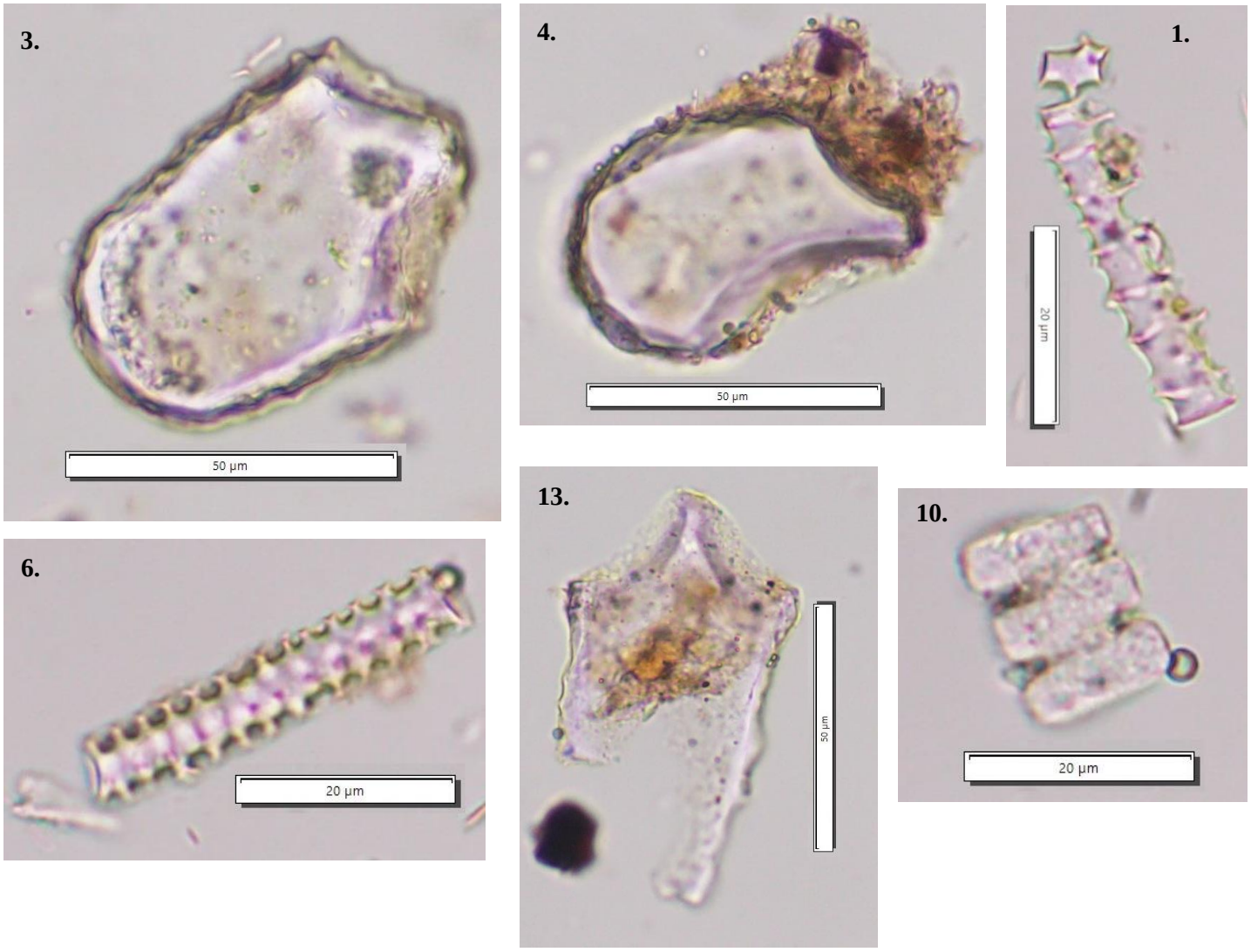
Ka4_2025_25_22

Sample no	Identifications
Ka4_2025_25_22_1	Bulliform flabellate
Ka4_2025_25_22_2	Bulliform flabellate
Ka4_2025_25_22_3	Cross
Ka4_2025_25_22_4	Bilobate
Ka4_2025_25_22_5	Bulliform flabellate
Ka4_2025_25_22_6	Bilobate

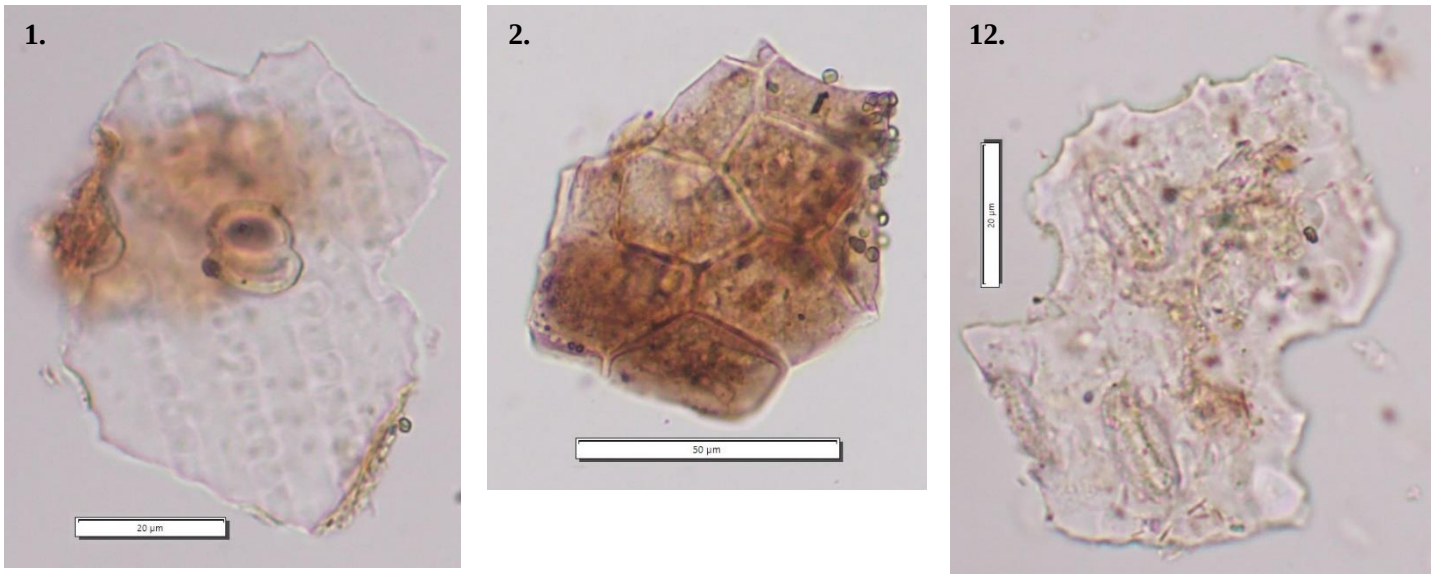
Ka4_2025_25_31

Sample no	Identifications
Ka4_2025_25_31_1	Bulliform flabellate
Ka4_2025_25_31_2	Rondel Tall
Ka4_2025_25_31_3	Bulliform flabellate
Ka4_2025_25_31_4	MULTICELL
Ka4_2025_25_31_5	Bulliform flabellate

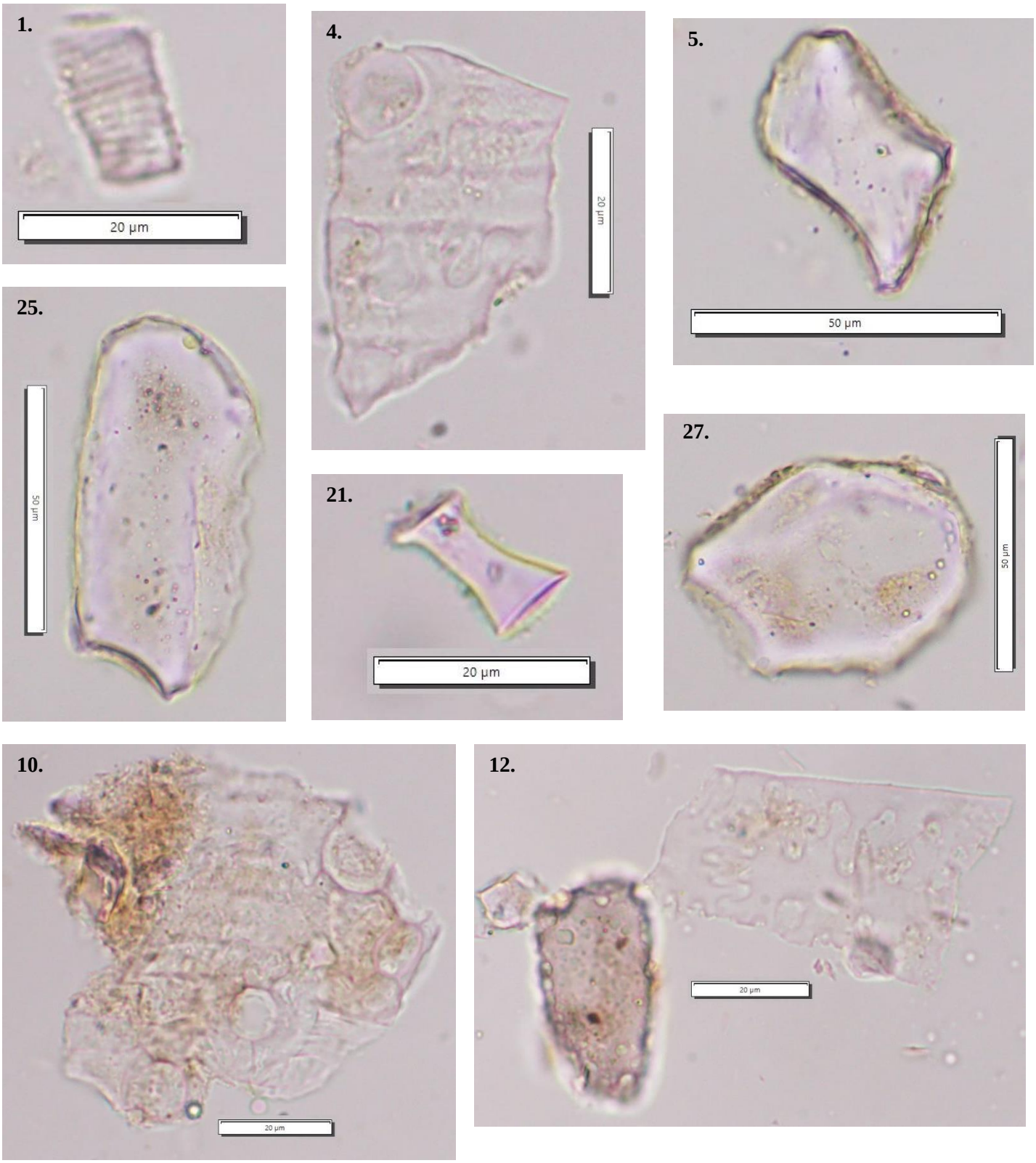
Ryc. 38 Obiekt 25 próba 1, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_1.
Fig. 38 Feature 25 sample 1: the photo number corresponds to the phytolith number in the table table Ka4_2025_25_1.



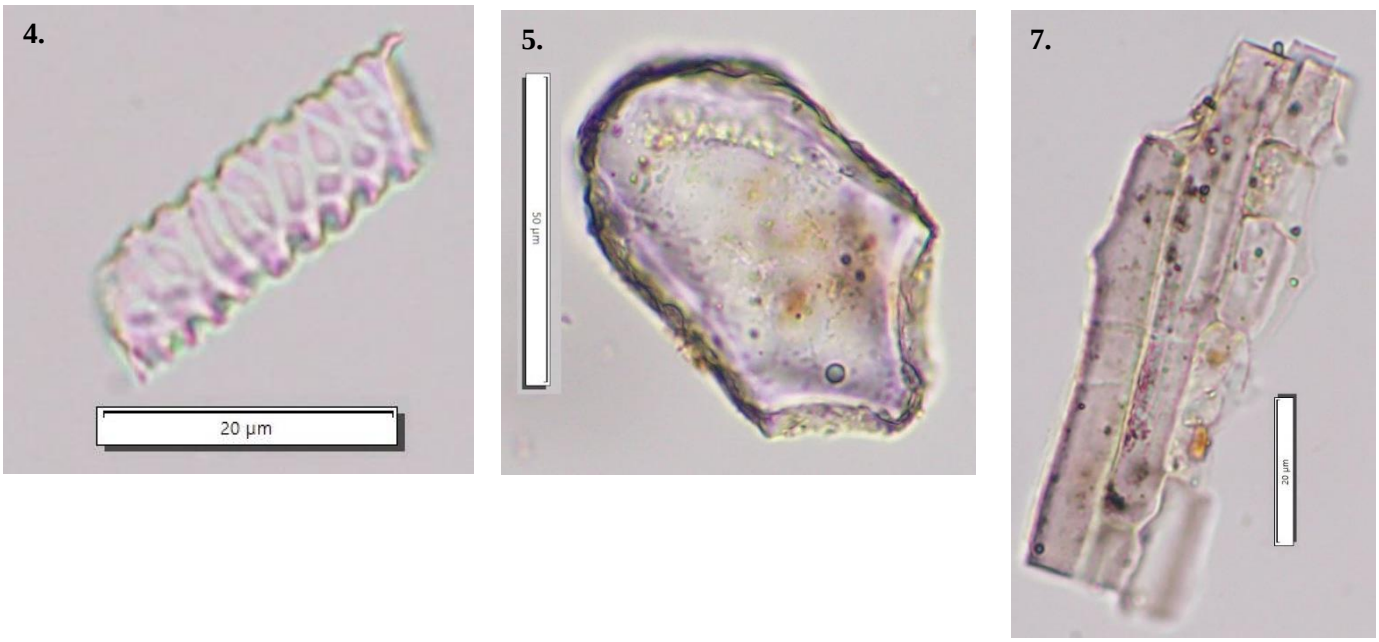
Ryc. 39 Obiekt 25 próba 2, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_2.
Fig. 39 Feature 25 sample 2: the photo number corresponds to the phytolith number in the table Ka4_2025_25_2.



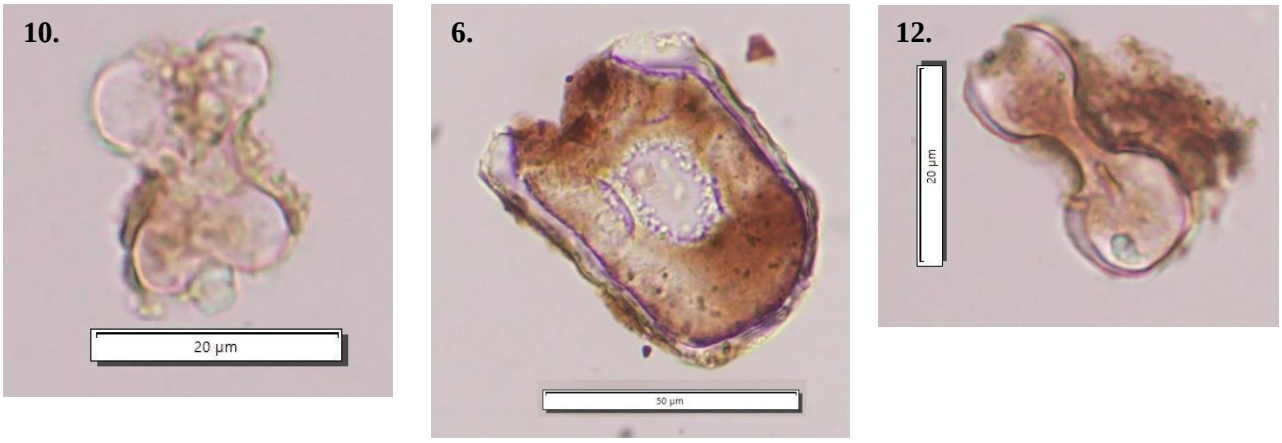
Ryc. 40 Obiekt 25 próba 3, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_3.
Fig. 40 Feature 25 sample 3: the photo number corresponds to the phytolith number in the table Ka4_2025_25_3.



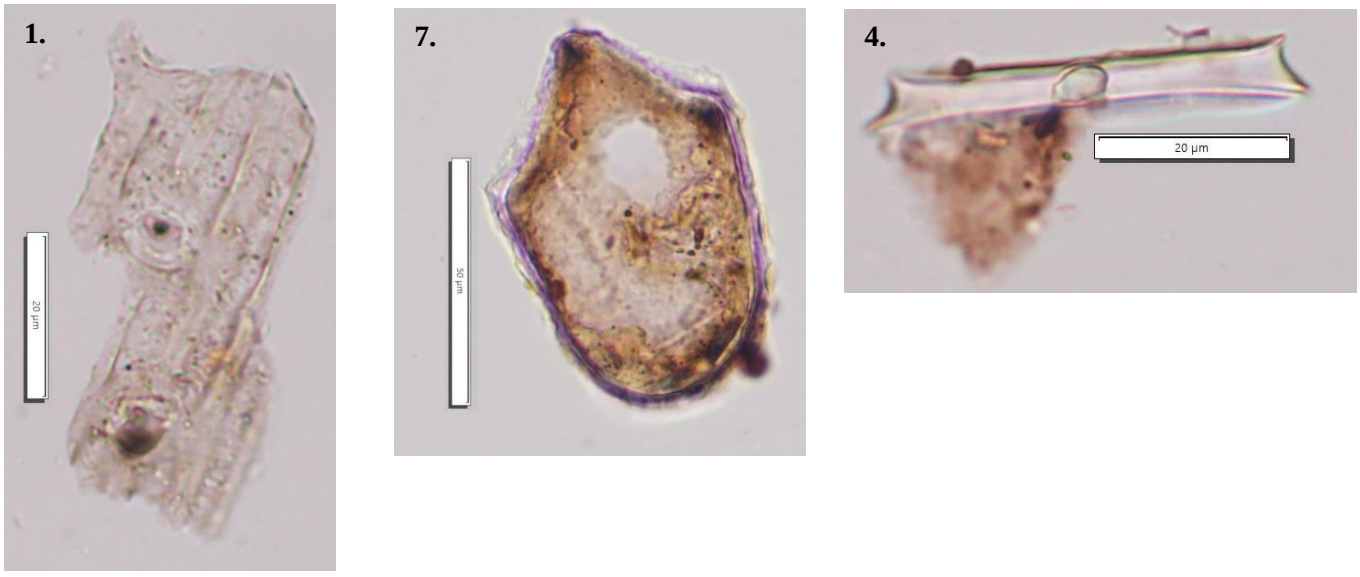
Ryc. 41 Obiekt 25 próba 4, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_4.
Fig. 41 Feature 25 sample 4: the photo number corresponds to the phytolith number in the table Ka4_2025_25_4.



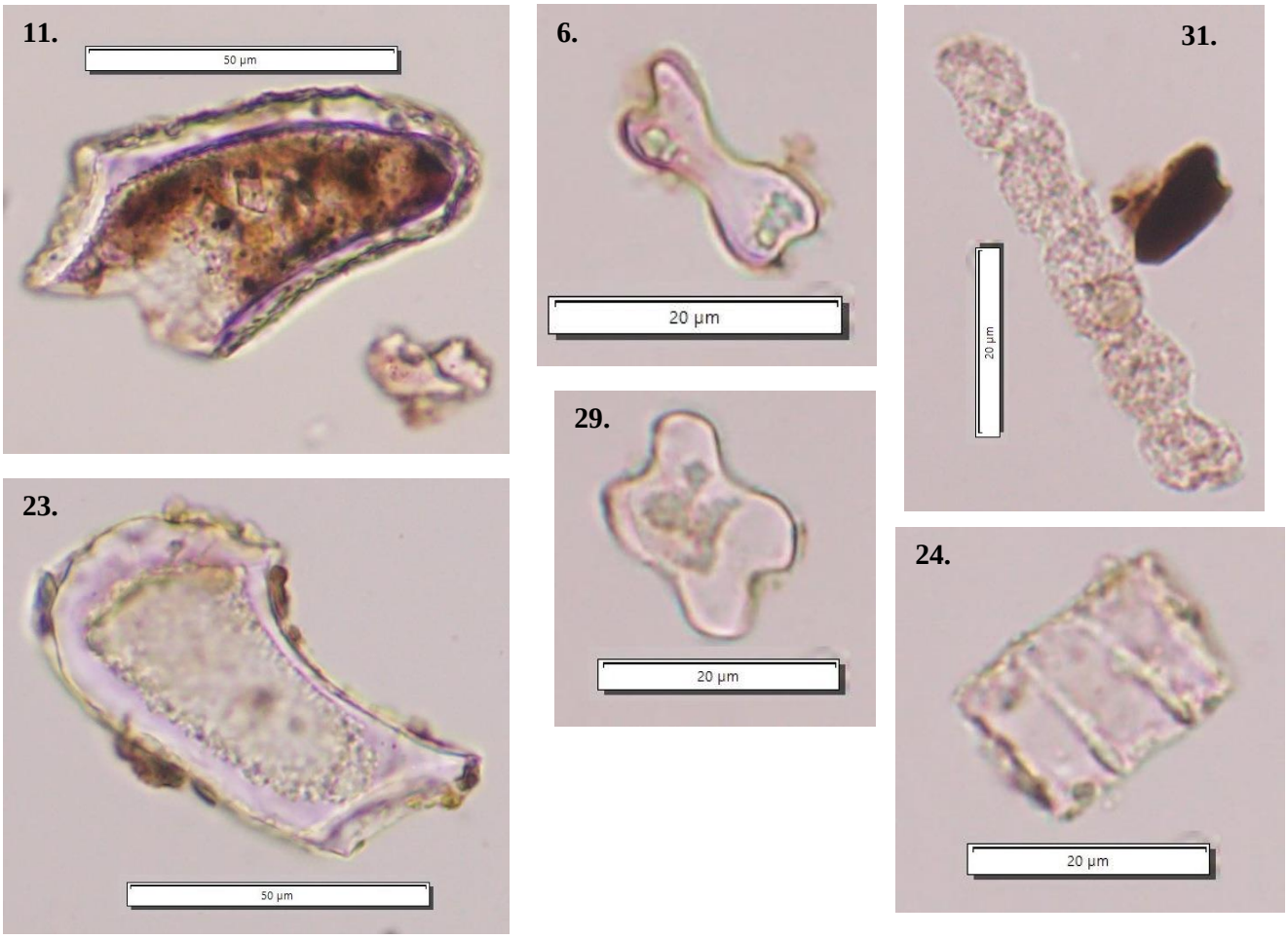
Ryc. 42 Obiekt 25 próba 5, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_5.
Fig. 42 Feature 25 sample 5: the photo number corresponds to the phytolith number in the table Ka4_2025_25_5.



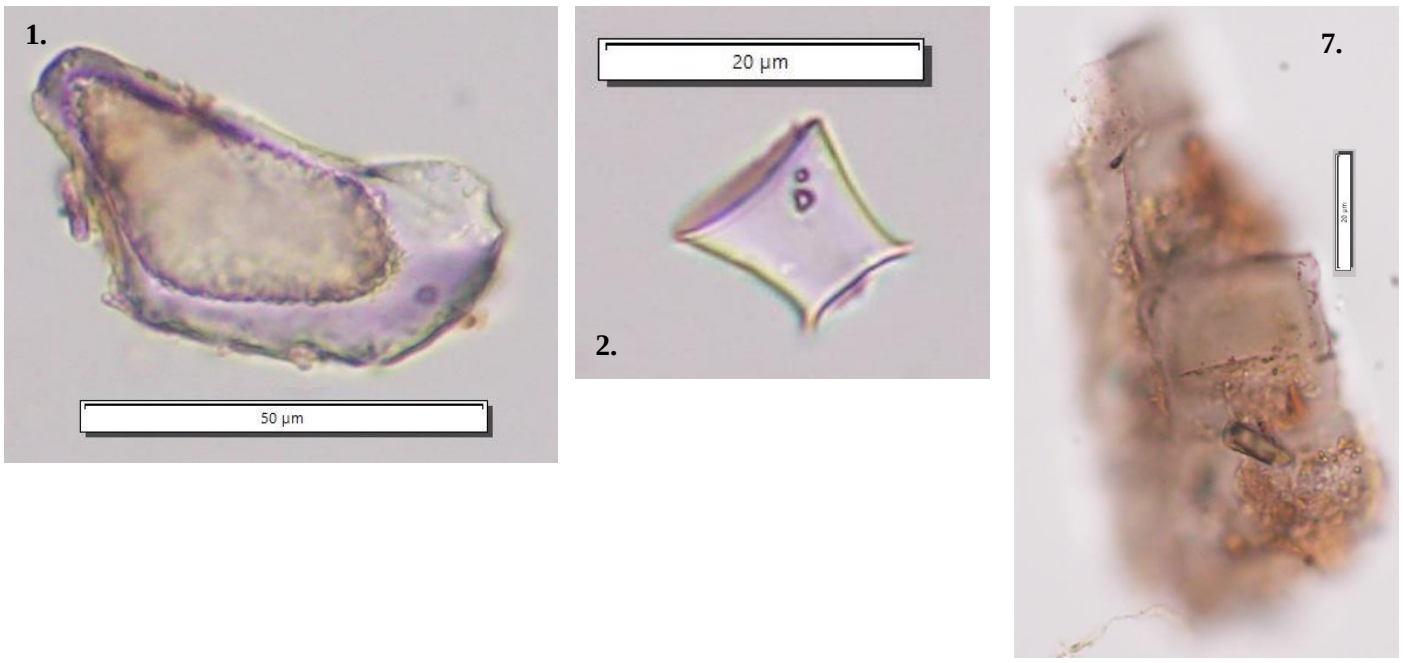
Ryc. 43 Obiekt 25 próba 6, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_6.
Fig. 43 Feature 25 sample 6: the photo number corresponds to the phytolith number in the table Ka4_2025_25_6.



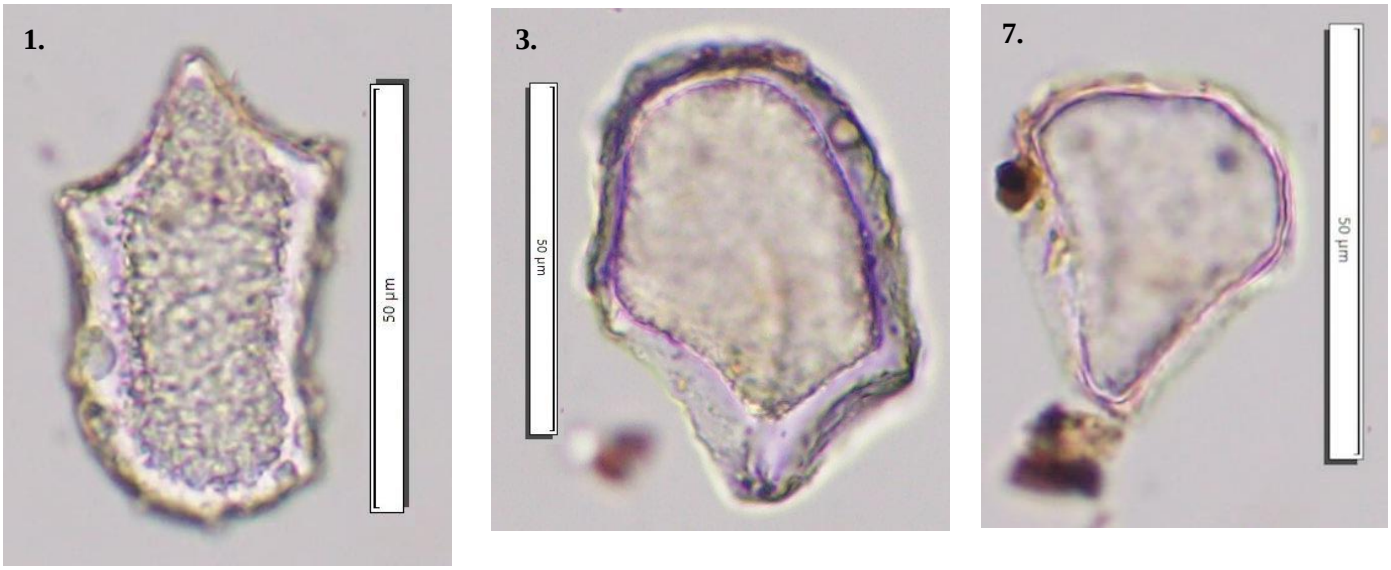
Ryc. 44 Obiekt 25 próba 7, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_7.
Fig. 44 Feature 25 sample 7: the photo number corresponds to the phytolith number in the table Ka4_2025_25_7.



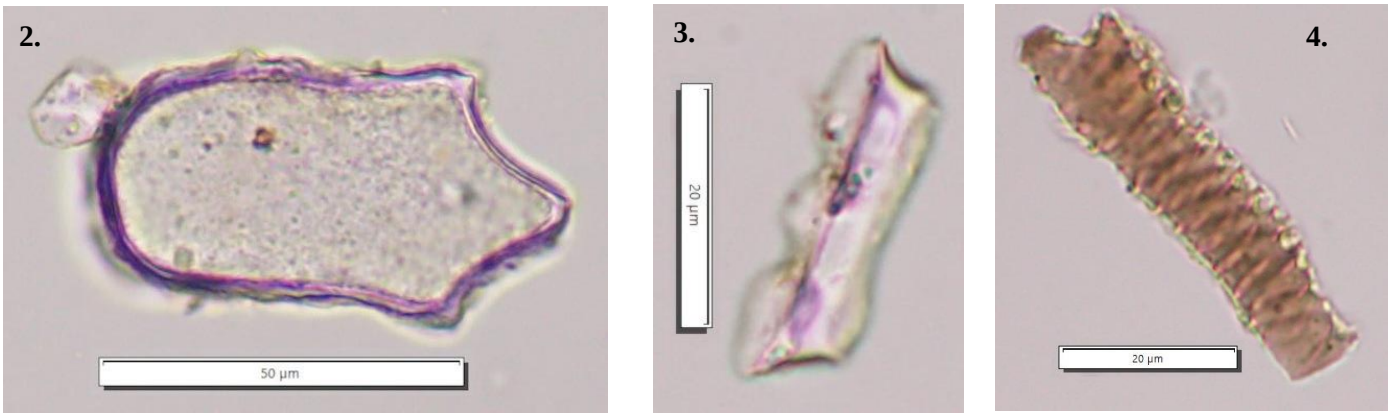
Ryc. 45 Obiekt 25 próba 8, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_8.
Fig. 45 Feature 25 sample 8: the photo number corresponds to the phytolith number in the table Ka4_2025_25_8.



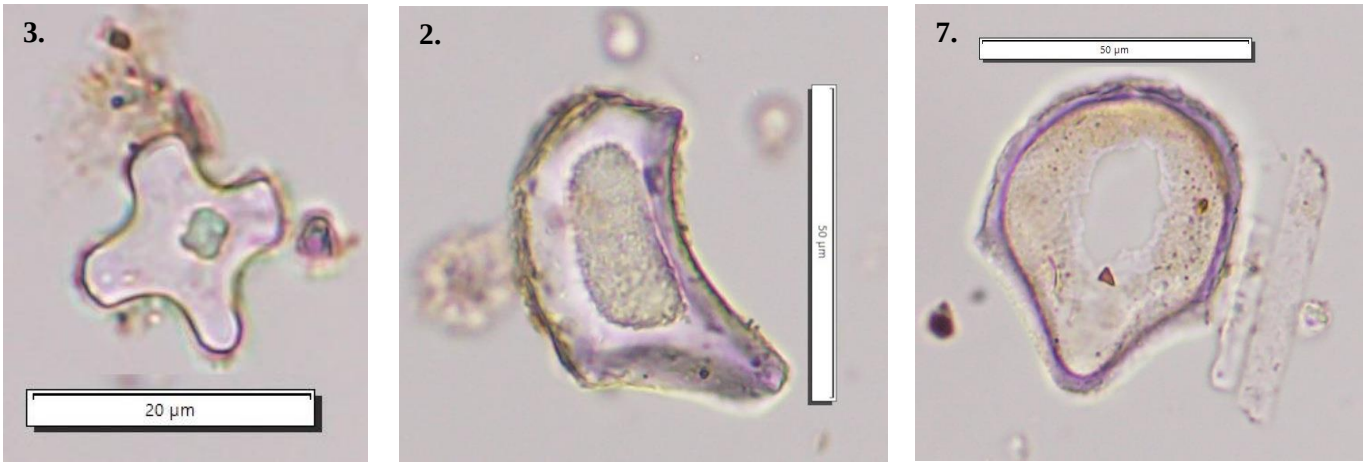
Ryc. 46 Obiekt 25 próba 10, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_10.
Fig. 46 Feature 25 sample 10: the photo number corresponds to the phytolith number in the table Ka4_2025_25_10.



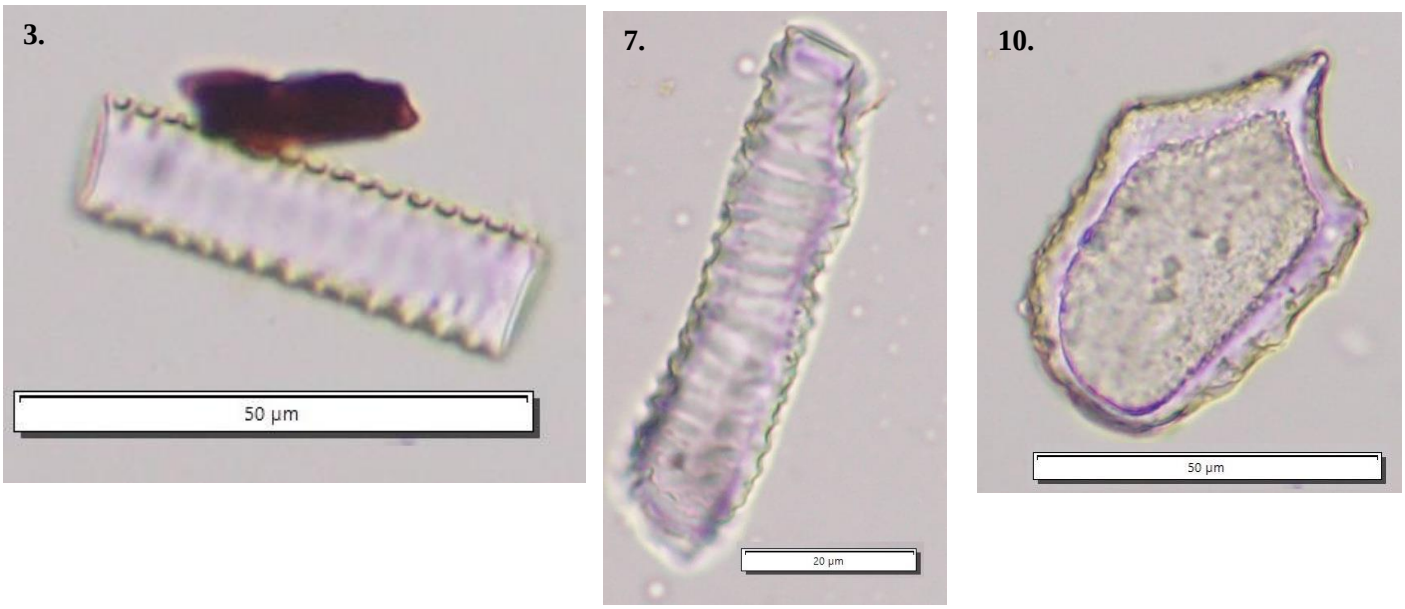
Ryc. 47 Obiekt 25 próba 12, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_12.
Fig. 47 Feature 25 sample 12: the photo number corresponds to the phytolith number in the table Ka4_2025_25_12.



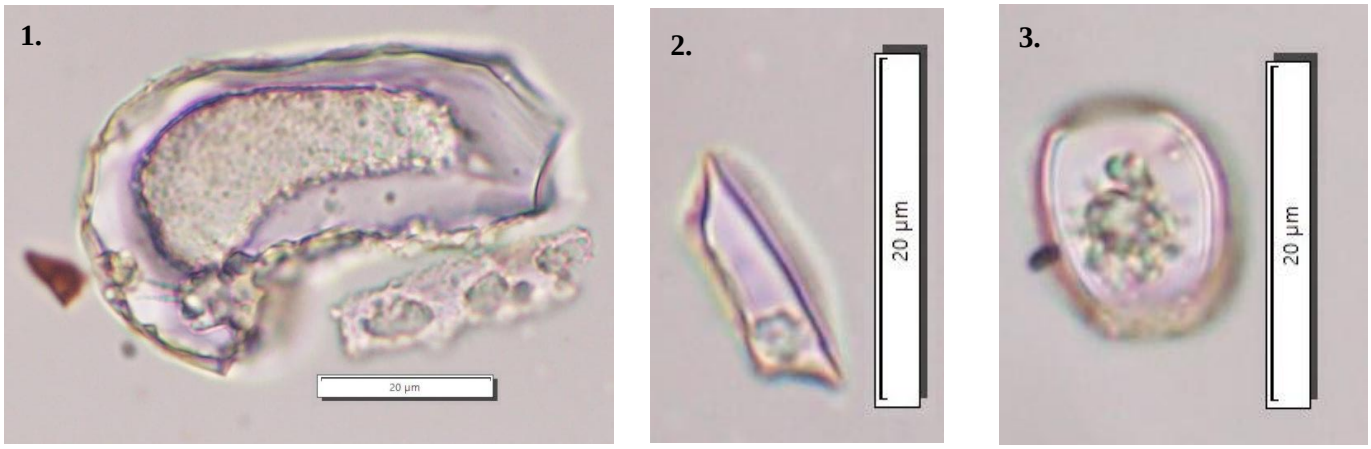
Ryc. 48 Obiekt 25 próba 13, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_13.
Fig. 48 Feature 25 sample 13: the photo number corresponds to the phytolith number in the table Ka4_2025_25_13.



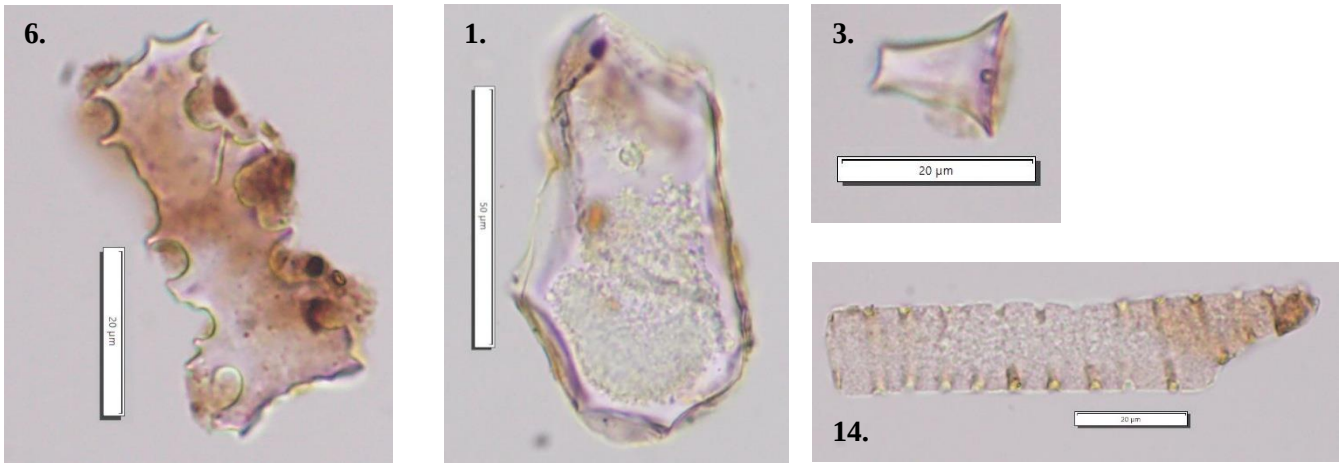
Ryc. 49 Obiekt 25 próba 14, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_14.
Fig. 49 Feature 25 sample 14: the photo number corresponds to the phytolith number in the table Ka4_2025_25_14.



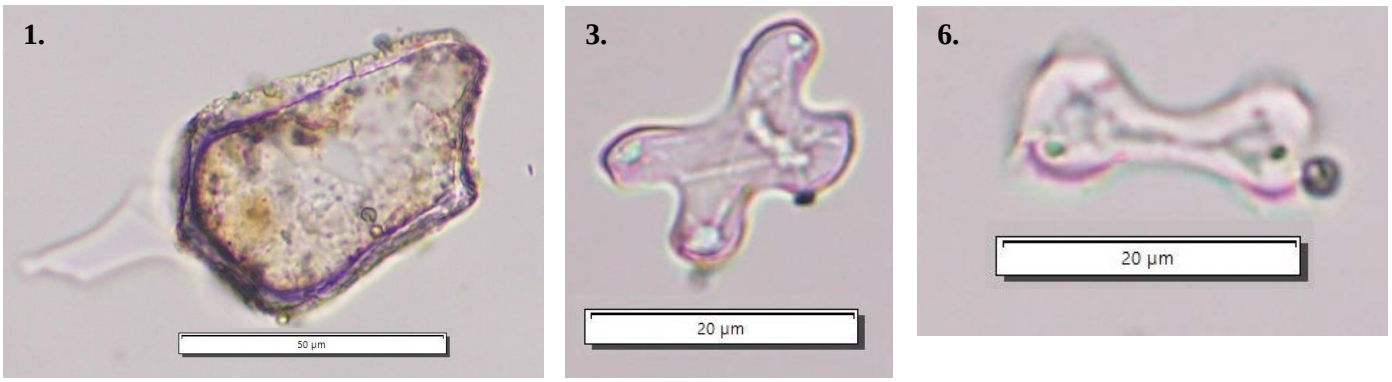
Ryc. 50 Obiekt 25 próba 15, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_15.
Fig. 50 Feature 25 sample 15: the photo number corresponds to the phytolith number in the table Ka4_2025_25_15.



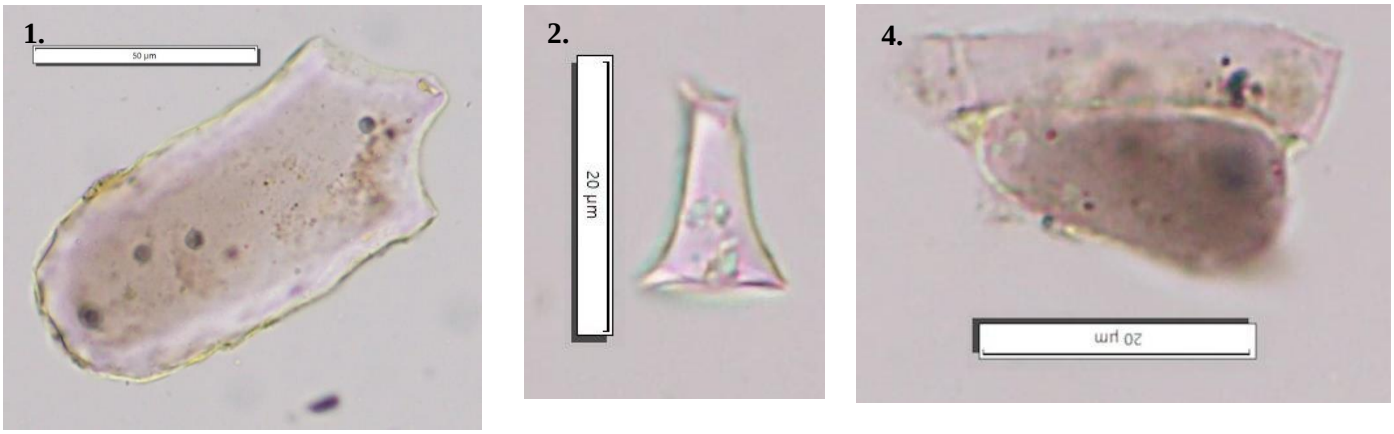
Ryc. 51 Obiekt 25 próba 19, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_19.
Fig. 51 Feature 25 sample 19: the photo number corresponds to the phytolith number in the table Ka4_2025_25_19.



Ryc. 52 Obiekt 25 próba 22, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_22.
Fig. 52 Feature 25 sample 22: the photo number corresponds to the phytolith number in the table Ka4_2025_25_22.



Ryc. 53 Obiekt 25 próba 31, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_25_31.
Fig. 53 Feature 25 sample 31: the photo number corresponds to the phytolith number in the table Ka4_2025_25_31.



OBIEKT/FEATURE 30

Ka4_2025_30_3

Sample no	Identifications

Ka4_2025_30_3_1	Crenate
Ka4_2025_30_3_2	Crenate

Ka4_2025_30_3_3	Crenate

Ka4_2025_30_4

Sample no	Identifications
Ka4_2025_30_4_1	Elongate sinuate

Ka4_2025_30_4_2	Crenate
Ka4_2025_30_4_3	Polylobate
Ka4_2025_30_4_4	Saddle
Ka4_2025_30_4_5	Crenate

Ka4_2025_30_4_6	Crenate

Ka4_2025_30_5

Sample no	Identifications

Ka4_2025_30_5_1	WM
Ka4_2025_30_5_2	Polylobate

Ka4_2025_30_5_3	Bilobate

Ka4_2025_30_6

Sample no	Identifications
Ka4_2025_30_6_1	WM
Ka4_2025_30_6_2	Elongate dendritic
Ka4_2025_30_6_3	Crenate
Ka4_2025_30_6_4	Rondel

Ka4_2025_30_6_5	Crenate
Ka4_2025_30_6_6	Bilobate
Ka4_2025_30_6_7	Crenate
Ka4_2025_30_6_8	Polylobate
Ka4_2025_30_6_9	Crenate
Ka4_2025_30_6_10	Crenate
Ka4_2025_30_6_11	WM

Ka4_2025_30_6_12	Rondel
Ka4_2025_30_6_13	WM
Ka4_2025_30_6_14	WM
Ka4_2025_30_6_15	Elongate sinuate

Ka4_2025_30_7

Sample no	Identifications
Ka4_2025_30_7_1	Saddle
Ka4_2025_30_7_2	Crenate
Ka4_2025_30_7_3	Spheroid echinate?
Ka4_2025_30_7_4	Elongate dendritic
Ka4_2025_30_7_5	Rondel

Ka4_2025_30_7_6	Rondell Tall
Ka4_2025_30_7_7	Crenate
Ka4_2025_30_7_8	Polylobate
Ka4_2025_30_7_9	Crenate
Ka4_2025_30_7_10	Elongate sinuate
Ka4_2025_30_7_10	Crenate
Ka4_2025_30_7_11	WM
Ka4_2025_30_7_12	Rondel

Ka4_2025_30_7_13	Rondel
Ka4_2025_30_7_14	WM
Ka4_2025_30_7_15	Crenate
Ka4_2025_30_7_17	Crenate
Ka4_2025_30_7_18	WM
Ka4_2025_30_7_19	Rondel
Ka4_2025_30_7_19	WM

Ka4_2025_30_8

Sample no	Identifications
Ka4_2025_30_8_1	Elongate entire
Ka4_2025_30_8_1	Elongate entire

Ka4_2025_30_8_1	Elongate entire
Ka4_2025_30_8_1	Elongate dendritic
Ka4_2025_30_8_1	Crenate

Ka4_2025_30_8_1	WM

Ka4_2025_30_9

Sample no	Identifications
Ka4_2025_30_9_1	WM
Ka4_2025_30_9_2	Rondel
Ka4_2025_30_9_3	Rondel

Ka4_2025_30_9_4	WM
Ka4_2025_30_9_5	Acute bulbosus
Ka4_2025_30_9_6	Crenate
Ka4_2025_30_9_7	WM

Ka4_2025_30_9_8	Elongate dendritic
Ka4_2025_30_9_9	Crenate
Ka4_2025_30_9_10	Bilobate

Ka4_2025_30_10

Sample no	Identifications
Ka4_2025_30_10_1	WM
Ka4_2025_30_10_2	Rondel

Ka4_2025_30_10_3	Crenate
Ka4_2025_30_10_4	WM
Ka4_2025_30_10_5	Crenate
Ka4_2025_30_10_6	Rondel

Ka4_2025_30_10_7	Crenate
Ka4_2025_30_10_8	Crenate
Ka4_2025_30_10_9	Crenate
Ka4_2025_30_10_10	Rondel

Ka4_2025_30_11

Sample no	Identifications
Ka4_2025_30_11_1	Crenate
Ka4_2025_30_11_2	Crenate

Ka4_2025_30_11_3	Hat-cone
Ka4_2025_30_11_4	Crenate
Ka4_2025_30_11_5	Crenate

Ka4_2025_30_11_6	Bulliform flabellate
Ka4_2025_30_11_7	WM

Ka4_2025_30_12

Sample no	Identifications

Ka4_2025_30_12_1	Spheroid
Ka4_2025_30_12_2	Crenate

Ka4_2025_30_12_3	Tracheary

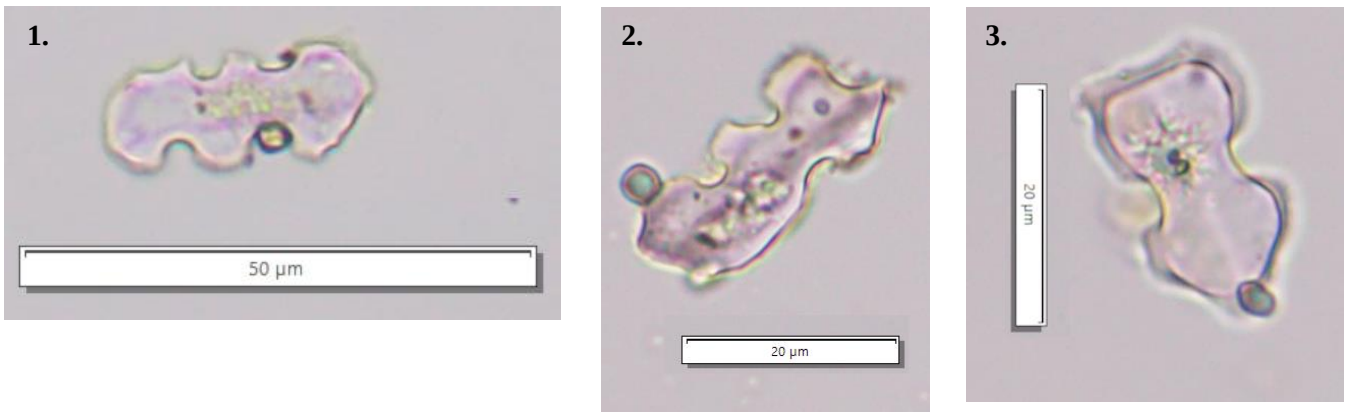
Ka4_2025_30_13

Sample no	Identifications
Ka4_2025_30_13_1	Bilobate
Ka4_2025_30_13_2	MULTICELL
Ka4_2025_30_13_3	Oblong

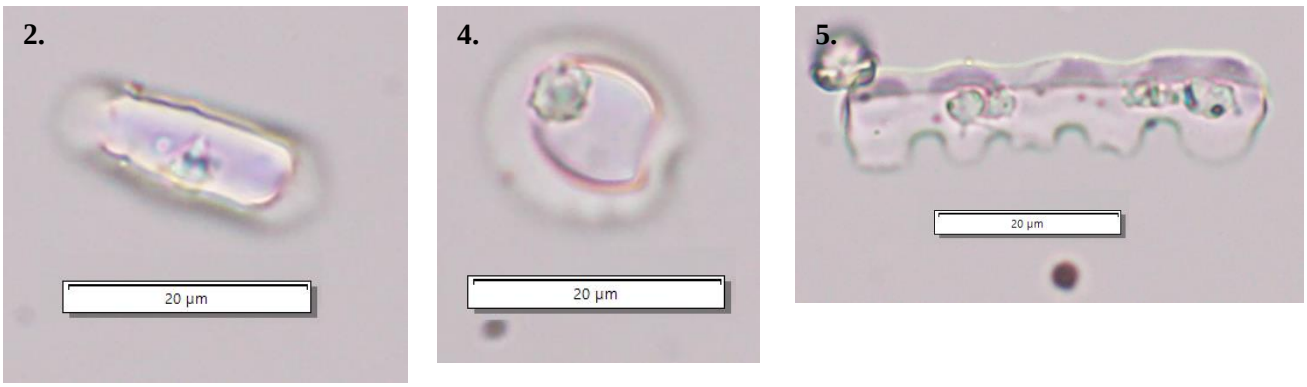
Ka4_2025_30_14

Sample no	Identifications
Ka4_2025_30_14_1	Crenate
Ka4_2025_30_14_2	Crenate
Ka4_2025_30_14_3	Crenate
Ka4_2025_30_14_4	Rondel
Ka4_2025_30_14_5	WM
Ka4_2025_30_14_6	Rondel
Ka4_2025_30_14_7	WM
Ka4_2025_30_14_8	Crenate
Ka4_2025_30_14_9	Polylobate
Ka4_2025_30_14_10	Crenate
Ka4_2025_30_14_11	Rondel
Ka4_2025_30_14_12	WM
Ka4_2025_30_14_13	Crenate

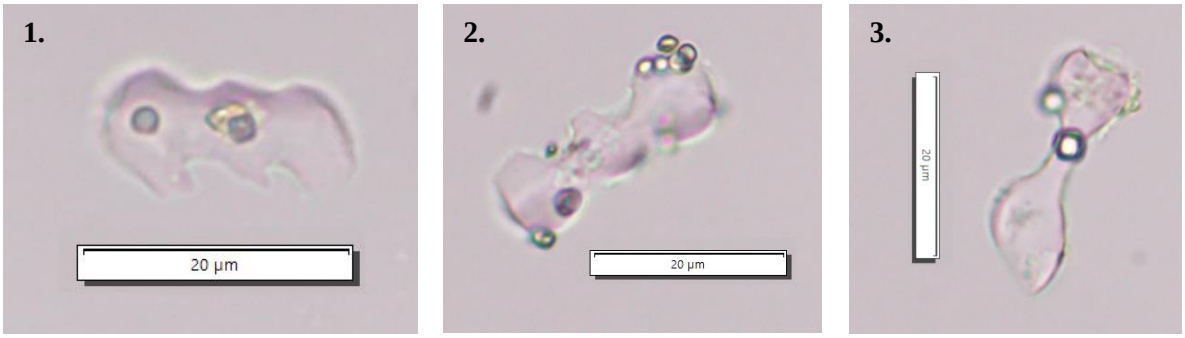
Ryc. 54 Obiekt 30 próba 3, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_30_3.
Fig. 54 Feature 30 sample 3: the photo number corresponds to the phytolith number in the table Ka4_2025_30_3.



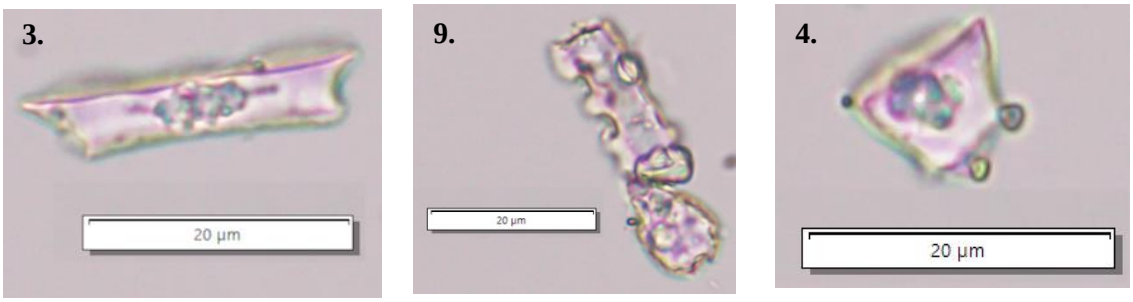
Ryc. 55 Obiekt 30 próba 4, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_30_4.
Fig. 55 Feature 30 sample 4: the photo number corresponds to the phytolith number in the table Ka4_2025_30_4.



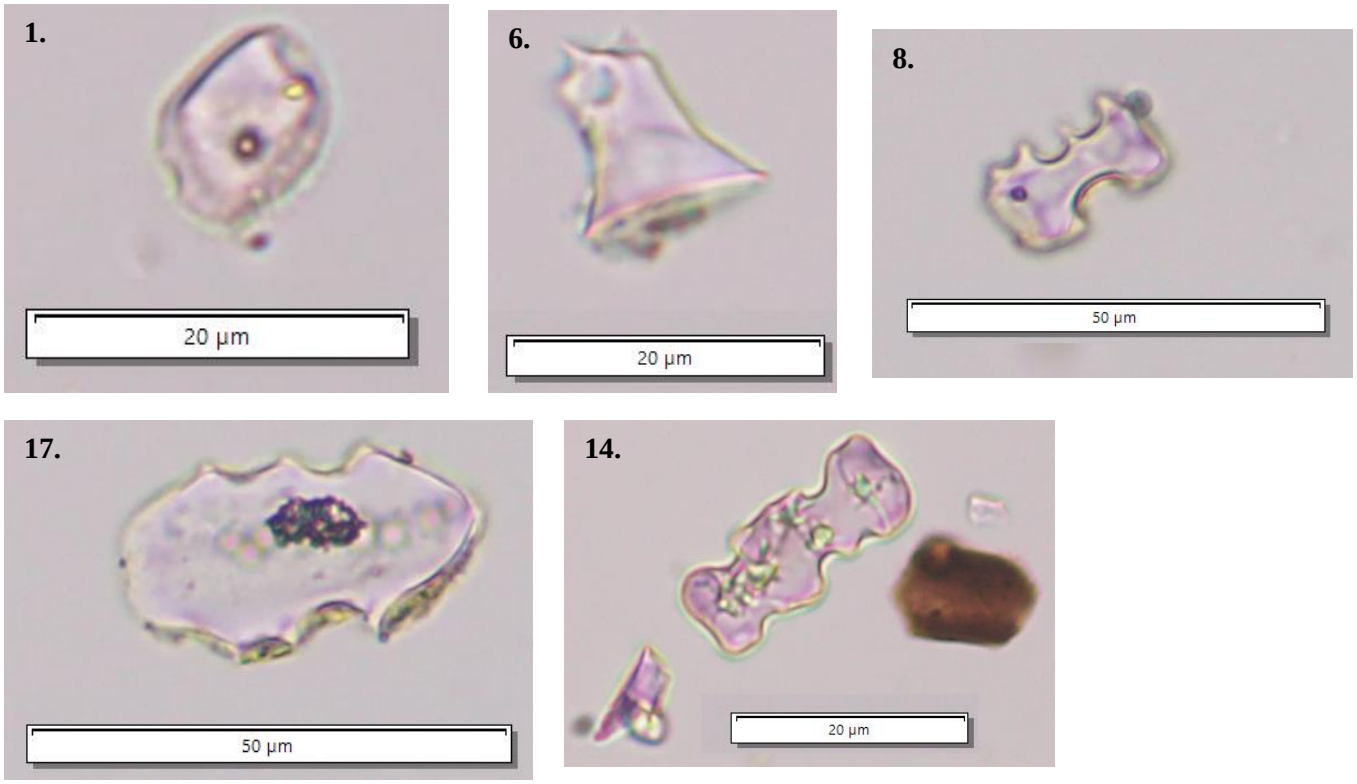
Ryc. 56 Obiekt 30 próba 5, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_30_5.
Fig. 56 Feature 30 sample 5: the photo number corresponds to the phytolith number in the table Ka4_2025_30_5.



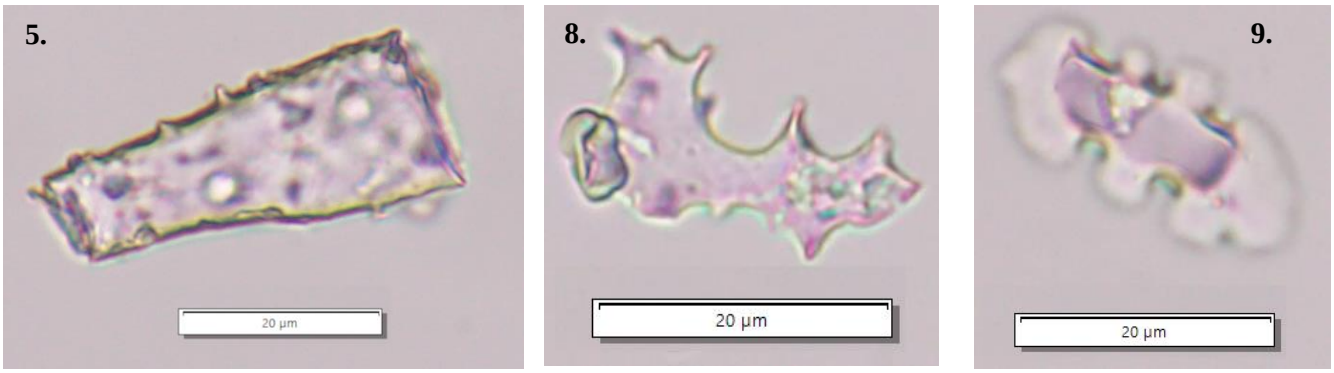
Ryc. 57 Obiekt 30 próba 6, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_30_6.
Fig. 57 Feature 30 sample 6: the photo number corresponds to the phytolith number in the table Ka4_2025_30_6.



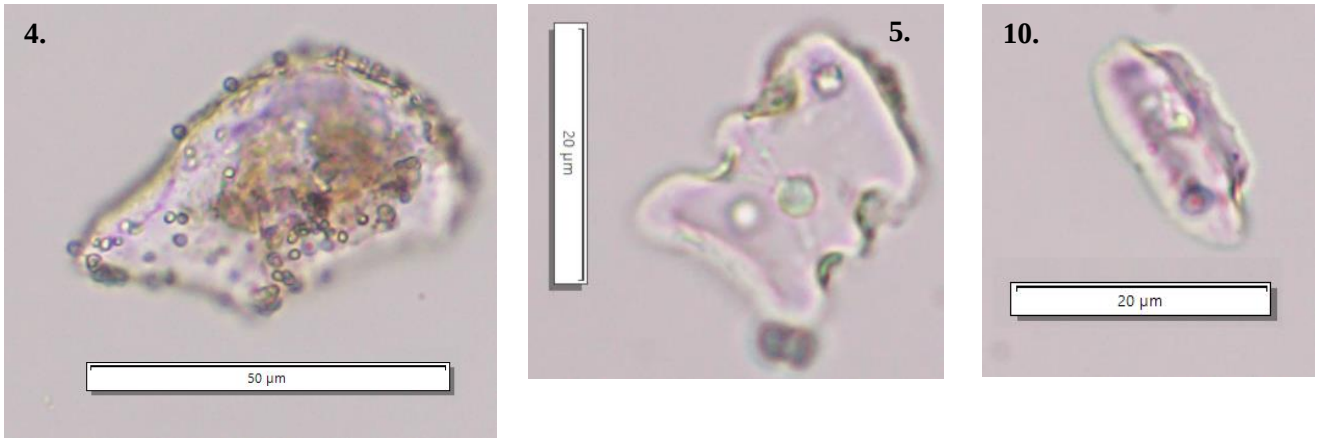
Ryc. 58 Obiekt 30 próba 7, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_30_7.
Fig. 58 Feature 30 sample 7: the photo number corresponds to the phytolith number in the table Ka4_2025_30_7.



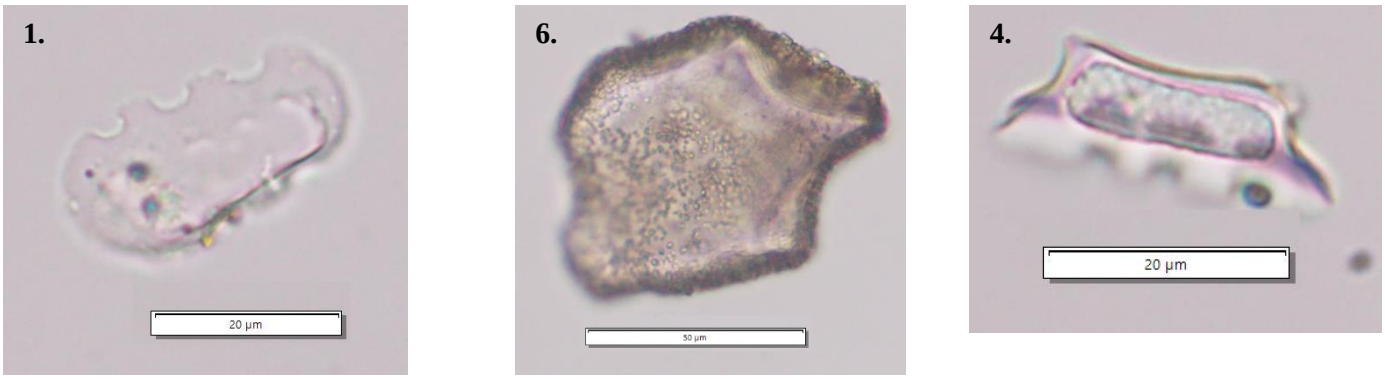
Ryc. 59 Obiekt 30 próba 9, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_30_9.
Fig. 59 Feature 30 sample 9: the photo number corresponds to the phytolith number in the table Ka4_2025_30_9.



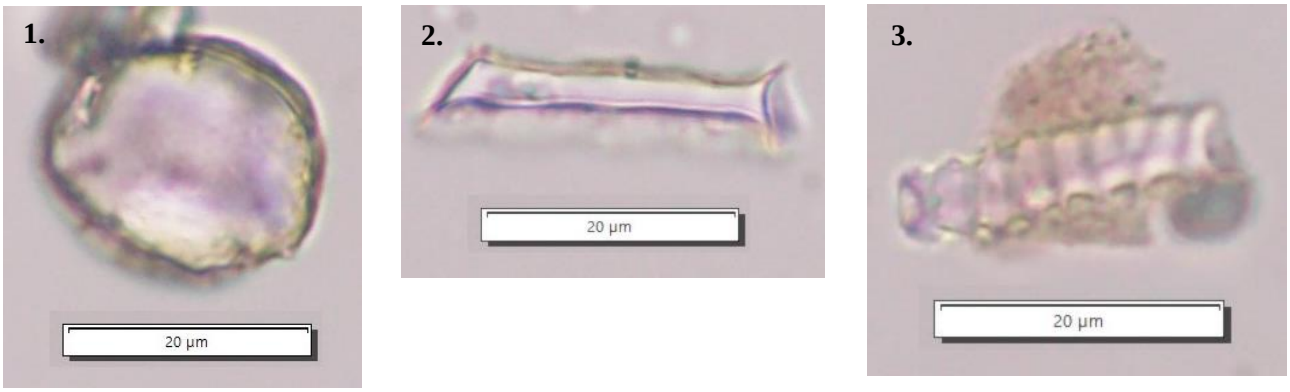
Ryc. 60 Obiekt 30 próba 10, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_30_10.
Fig. 60 Feature 30 sample 10: the photo number corresponds to the phytolith number in the table Ka4_2025_30_10.



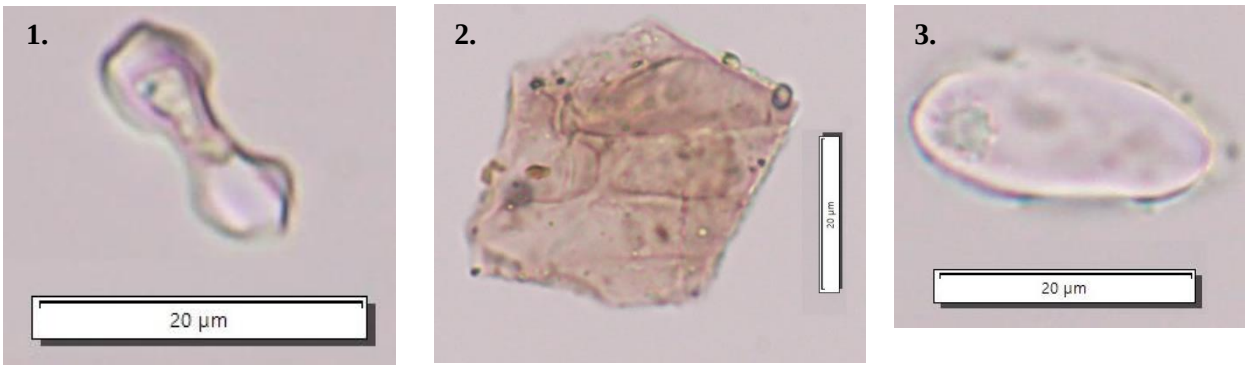
Ryc. 61 Obiekt 30 próba 11, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_30_11.
Fig. 61 Feature 30 sample 11: the photo number corresponds to the phytolith number in the table Ka4_2025_30_11.



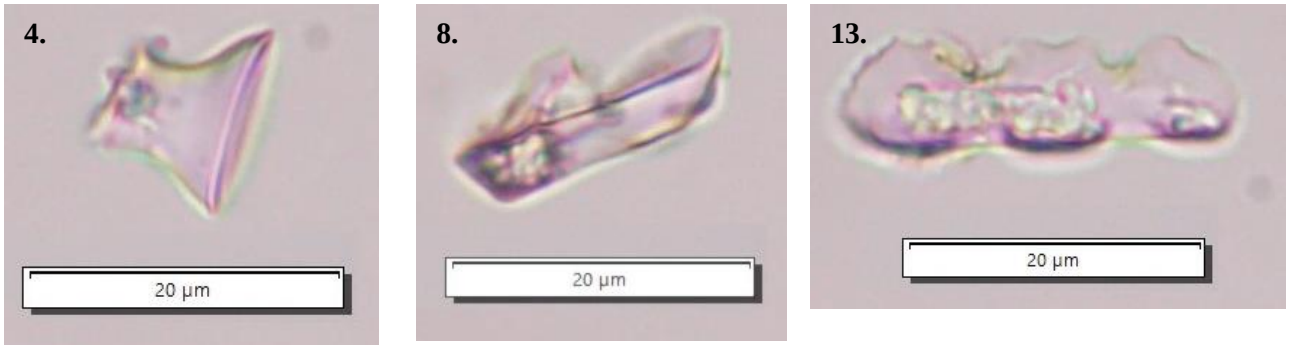
Ryc. 62 Obiekt 30 próba 12, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_30_12.
Fig. 62 Feature 30 sample 12: the photo number corresponds to the phytolith number in the table Ka4_2025_30_12.



Ryc. 63 Obiekt 30 próba 13, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_30_13.
Fig. 63 Feature 30 sample 13: the photo number corresponds to the phytolith number in the table Ka4_2025_30_13.



Ryc. 64 Obiekt 30 próba 14, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_30_14.
Fig. 64 Feature 30 sample 14: the photo number corresponds to the phytolith number in the table Ka4_2025_30_14.



OBIEKT/FEATURE 38

Ka4_2025_38_1

Sample no	Identifications
Ka4_2025_38_1_1	WM
Ka4_2025_38_1_2	Crenate
Ka4_2025_38_1_3	Crenate
Ka4_2025_38_1_4	Tracheary
Ka4_2025_38_1_5	Tracheary
Ka4_2025_38_1_6	Polylobate
Ka4_2025_38_1_7	Rondel
Ka4_2025_38_1_8	Polylobate
Ka4_2025_38_1_9	Polylobate

Ka4_2025_38_2

Sample no	Identifications
Ka4_2025_38_2_1	Bilobate
Ka4_2025_38_2_2	Elongate dentate
Ka4_2025_38_2_3	WM
Ka4_2025_38_2_4	Elongate dentate
Ka4_2025_38_2_4	Elongate dentate
Ka4_2025_38_2_5	Elongate entire
Ka4_2025_38_2_6	Crenate
Ka4_2025_38_2_7	Tracheary
Ka4_2025_38_2_8	Tracheary
Ka4_2025_38_2_9	Elongate dentate
Ka4_2025_38_2_10	Elongate dendritic
Ka4_2025_38_2_11	Elongate entire
Ka4_2025_38_2_12	Crenate

Ka4_2025_38_3

Sample no	Identifications
Ka4_2025_38_3_1	Elongate sinuate
Ka4_2025_38_3_2	Elongate dendritic
Ka4_2025_38_3_3	Bilobate
Ka4_2025_38_3_4	WM
Ka4_2025_38_3_5	Elongate entire
Ka4_2025_38_3_6	Crenate
Ka4_2025_38_3_7	Elongate sinuate
Ka4_2025_38_3_8	Blocky
Ka4_2025_38_3_9	Bilobate
Ka4_2025_38_3_10	Elongate sinuate
Ka4_2025_38_3_11	Polylobate

Ka4_2025_38_4

Sample no	Identifications
Ka4_2025_38_4_1	Elongate entire
Ka4_2025_38_4_2	WM
Ka4_2025_38_4_3	WM
Ka4_2025_38_4_4	Bulliform flabellate
Ka4_2025_38_4_5	Bulliform flabellate
Ka4_2025_38_4_6	Crenate

Ka4_2025_38_5

Sample no	Identifications
Ka4_2025_38_5_1	Polylobate
Ka4_2025_38_5_2	Rondel
Ka4_2025_38_5_3	WM
Ka4_2025_38_5_4	WM
Ka4_2025_38_5_5	Rondel
Ka4_2025_38_5_6	Rondel

Ka4_2025_38_6

Sample no	Identifications
Ka4_2025_38_6_1	Elongate entire
Ka4_2025_38_6_2	Acute bulbosus
Ka4_2025_38_6_3	WM

Ka4_2025_38_7

Sample no	Identifications
Ka4_2025_38_7_1	WM
Ka4_2025_38_7_2	Crenate
Ka4_2025_38_7_3	Bilobate
Ka4_2025_38_7_4	Polylobate
Ka4_2025_38_7_5	Elongate entire
Ka4_2025_38_7_6	Bilobate
Ka4_2025_38_7_7	WM
Ka4_2025_38_7_8	Crenate
Ka4_2025_38_7_9	WM
Ka4_2025_38_7_10	Elongate entire
Ka4_2025_38_7_11	WM
Ka4_2025_38_7_12	Crenate
Ka4_2025_38_7_13	Blocky
Ka4_2025_38_7_14	WM
Ka4_2025_38_7_15	WM
Ka4_2025_38_7_16	Bilobate
Ka4_2025_38_7_17	Bilobate
Ka4_2025_38_7_18	Crenate

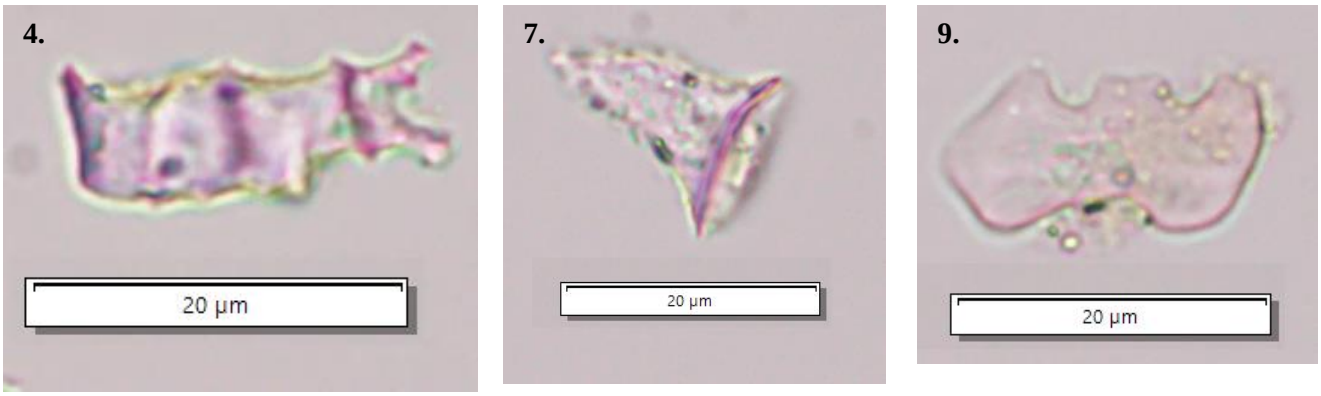
Ka4_2025_38_10

Sample no	Identifications
Ka4_2025_38_10_1	Elongate entire
Ka4_2025_38_10_2	WM
Ka4_2025_38_10_3	Elongate entire
Ka4_2025_38_10_4	Bulliform flabellate

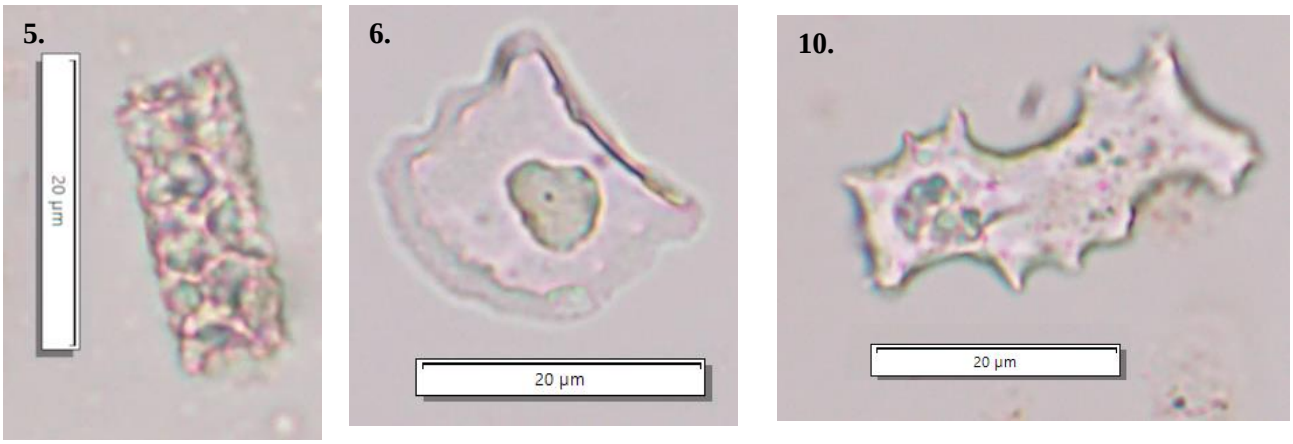
Ka4_2025_38_11

Sample no	Identifications
Ka4_2025_38_11_1	Elongate entire
Ka4_2025_38_11_2	Acute bulbosus
Ka4_2025_38_11_3	WM
Ka4_2025_38_11_4	WM
Ka4_2025_38_11_5	WM

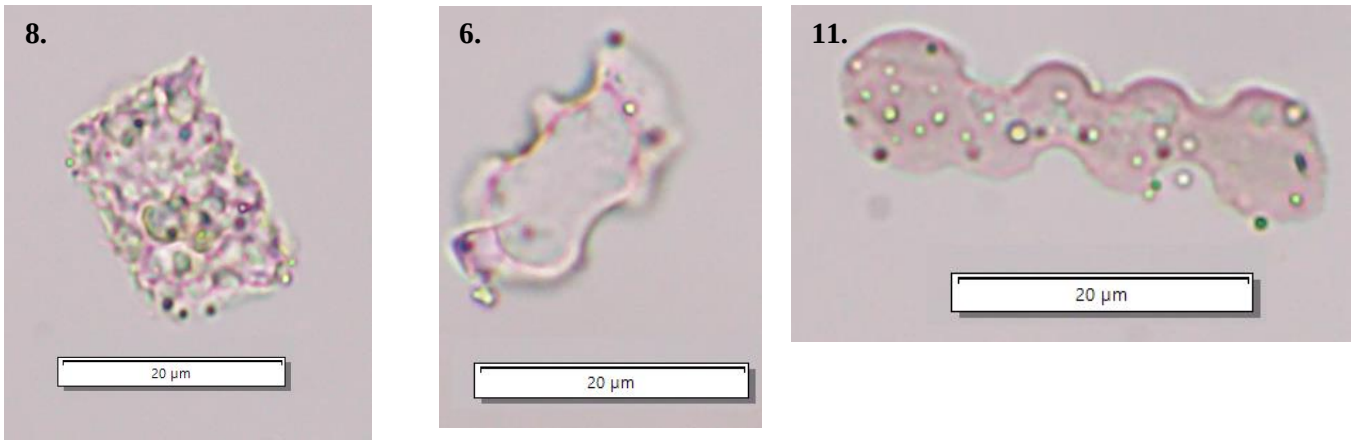
Ryc. 65 Obiekt 38 próba 1, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_38_1.
Fig. 65 Feature 38 sample 1: the photo number corresponds to the phytolith number in the table Ka4_2025_38_1.



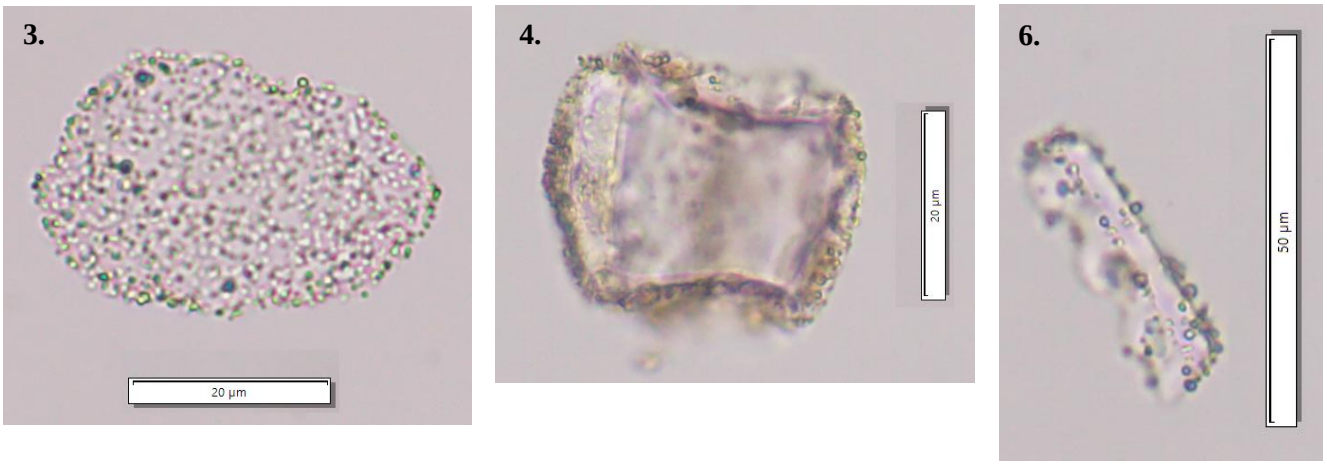
Ryc. 66 Obiekt 38 próba 2, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_38_2.
Fig. 66 Feature 38 sample 2: the photo number corresponds to the phytolith number in the table Ka4_2025_38_2.



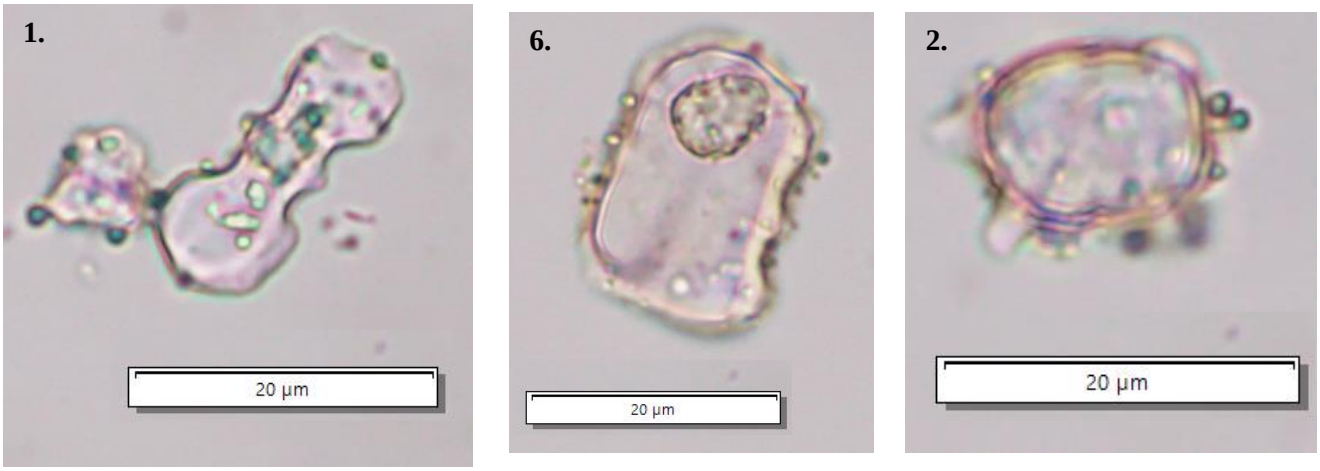
Ryc. 67 Obiekt 38 próba 3, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_38_3.
Fig. 67 Feature 38 sample 3: the photo number corresponds to the phytolith number in the table Ka4_2025_38_3.



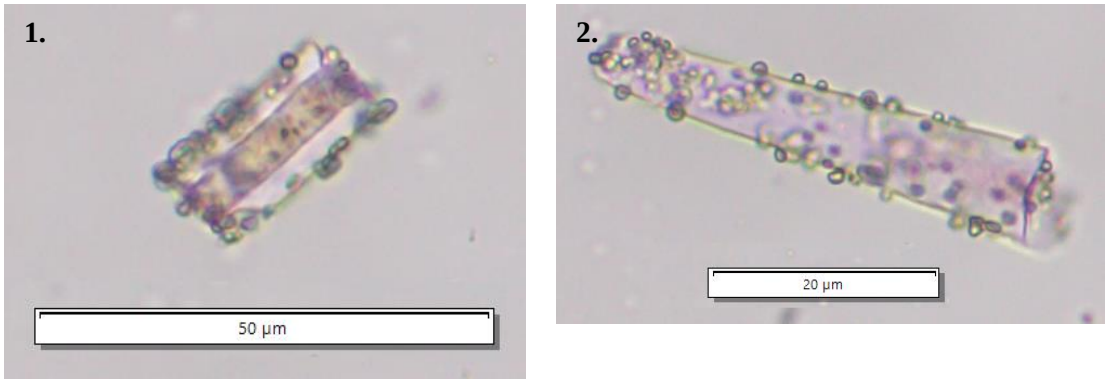
Ryc. 68 Obiekt 38 próba 4, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_38_4.
Fig. 68 Feature 38 sample 4: the photo number corresponds to the phytolith number in the table Ka4_2025_38_4.



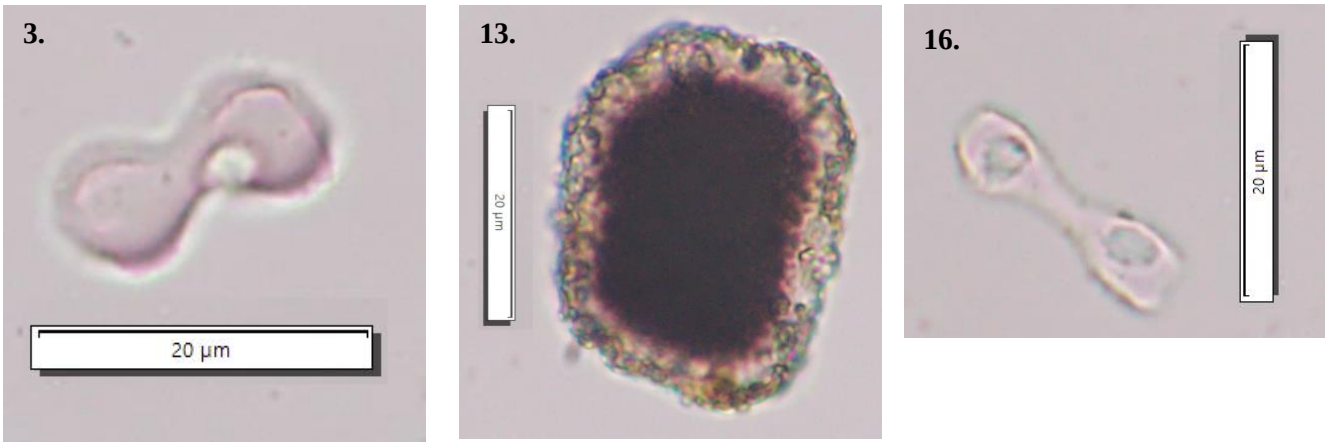
Ryc. 69 Obiekt 38 próba 5, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_38_5.
Fig. 69 Feature 38 sample 5: the photo number corresponds to the phytolith number in the table Ka4_2025_38_5.



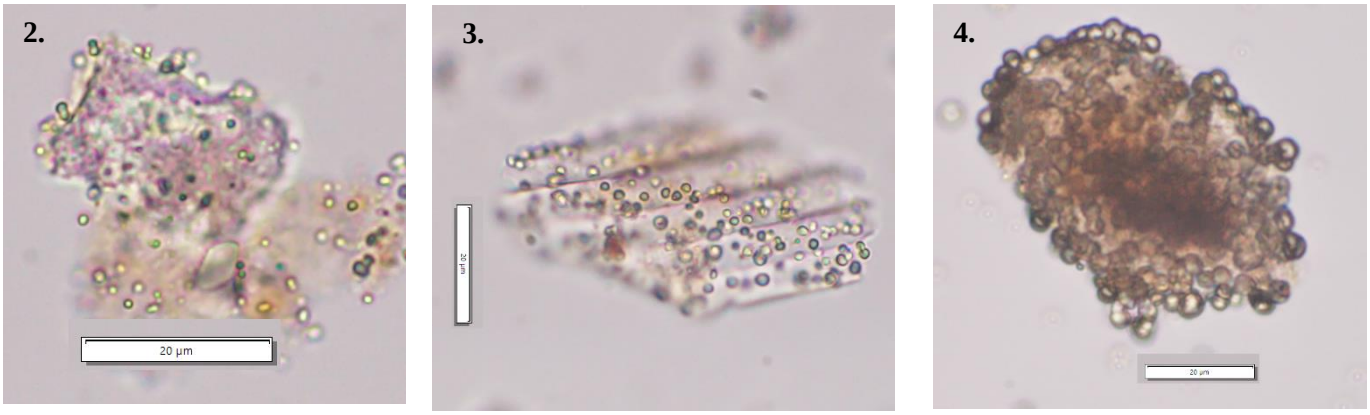
Ryc. 70 Obiekt 38 próba 6, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_38_6.
Fig. 70 Feature 38 sample 6: the photo number corresponds to the phytolith number in the table Ka4_2025_38_6.



Ryc. 71 Obiekt 38 próba 7, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_38_7.
Fig. 71 Feature 38 sample 7: the photo number corresponds to the phytolith number in the table Ka4_2025_38_7.



Ryc. 72 Obiekt 38 próba 10, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_38_10.
Fig. 72 Feature 38 sample 10: the photo number corresponds to the phytolith number in the table Ka4_2025_38_10.



OBIEKT/FEATURE W

Ka4_2025_W_1

Sample no	Identifications
Ka4_2025_W_1_1	Rondel
Ka4_2025_W_1_2	Irregular psilate
Ka4_2025_W_1_3	Trapezoid
Ka4_2025_W_1_3	Elongate entire
Ka4_2025_W_1_4	Crenate
Ka4_2025_W_1_5	Bulliform flabellate
Ka4_2025_W_1_6	Elongate sinuate

Ka4_2025_W_2

Sample no	Identifications
Ka4_2025_W_2_1	Irregulate echinate
Ka4_2025_W_2_2	Bilobate
Ka4_2025_W_2_3	Rondel
Ka4_2025_W_2_4	WM
Ka4_2025_W_2_5	Elongate entire

Ka4_2025_W_5

Sample no	Identifications
Ka4_2025_W_5_1	Polylobate
Ka4_2025_W_5_2	Rondel
Ka4_2025_W_5_3	Elongate thick
Ka4_2025_W_5_4	Crenate
Ka4_2025_W_5_5	Polylobate
Ka4_2025_W_5_6	Polylobate
Ka4_2025_W_5_7	Trapezoid
Ka4_2025_W_5_8	MULTICELL

Ka4_2025_W_6

Sample no	Identifications
Ka4_2025_W_6_1	Crenate
Ka4_2025_W_6_2	WM
Ka4_2025_W_6_3	Rondel
Ka4_2025_W_6_4	Crenate
Ka4_2025_W_6_5	Rondel
Ka4_2025_W_6_6	WM
Ka4_2025_W_6_7	Irregulate echinate
Ka4_2025_W_6_8	Crenate
Ka4_2025_W_6_9	Rondel
Ka4_2025_W_6_10	WM
Ka4_2025_W_6_11	Rondel
Ka4_2025_W_6_12	Rondel

Ka4_2025_W_7

Sample no	Identifications
Ka4_2025_W_7_1	Crenate
Ka4_2025_W_7_2	Polylobate
Ka4_2025_W_7_3	Polygonal
Ka4_2025_W_7_4	Rondel
Ka4_2025_W_7_5	Elongate dentate
Ka4_2025_W_7_6	Elongate dentate
Ka4_2025_W_7_7	Acute bulbosus
Ka4_2025_W_7_8	Crenate
Ka4_2025_W_7_9	Elongate dentate

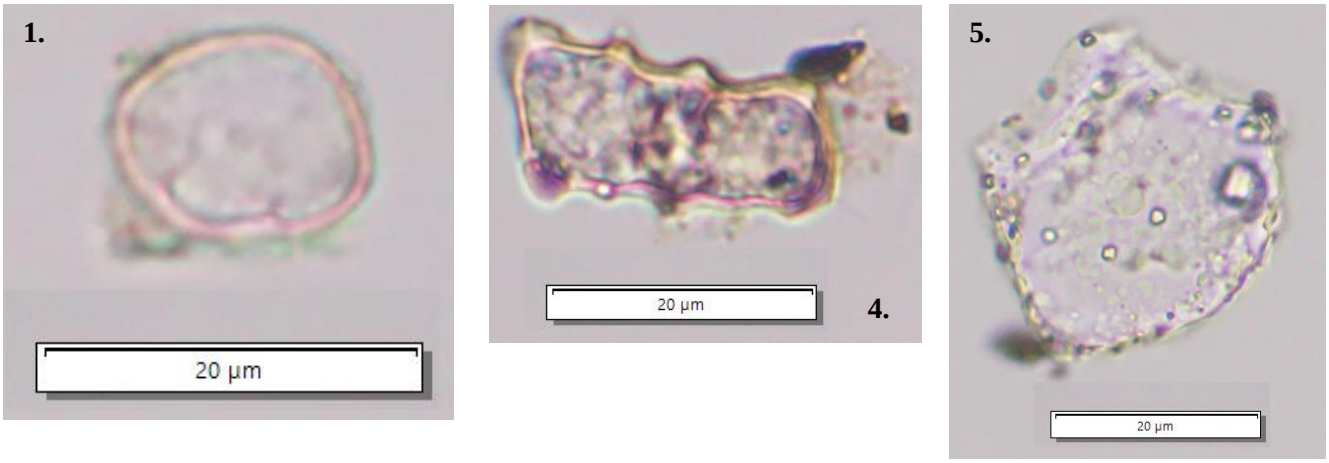
Ka4_2025_W_8

Sample no	Identifications
Ka4_2025_W_8_1	WM
Ka4_2025_W_8_2	Elongate sinuate
Ka4_2025_W_8_3	Rondel
Ka4_2025_W_8_4	WM
Ka4_2025_W_8_5	Rondel
Ka4_2025_W_8_6	Acute bulbosus
Ka4_2025_W_8_6	Acute bulbosus
Ka4_2025_W_8_7	WM
Ka4_2025_W_8_8	Acute bulbosus

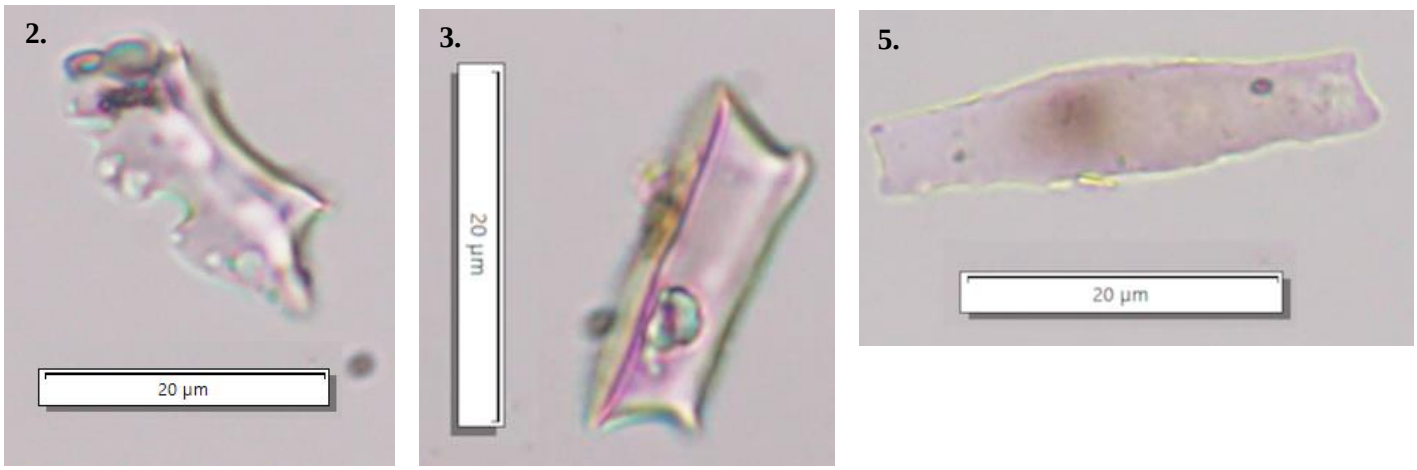
Ka4_2025_W_10

Sample no	Identifications
Ka4_2025_W_10_1	Elongate thick
Ka4_2025_W_10_2	Irregulate psilate
Ka4_2025_W_10_3	Elongate entire
Ka4_2025_W_10_4	WM

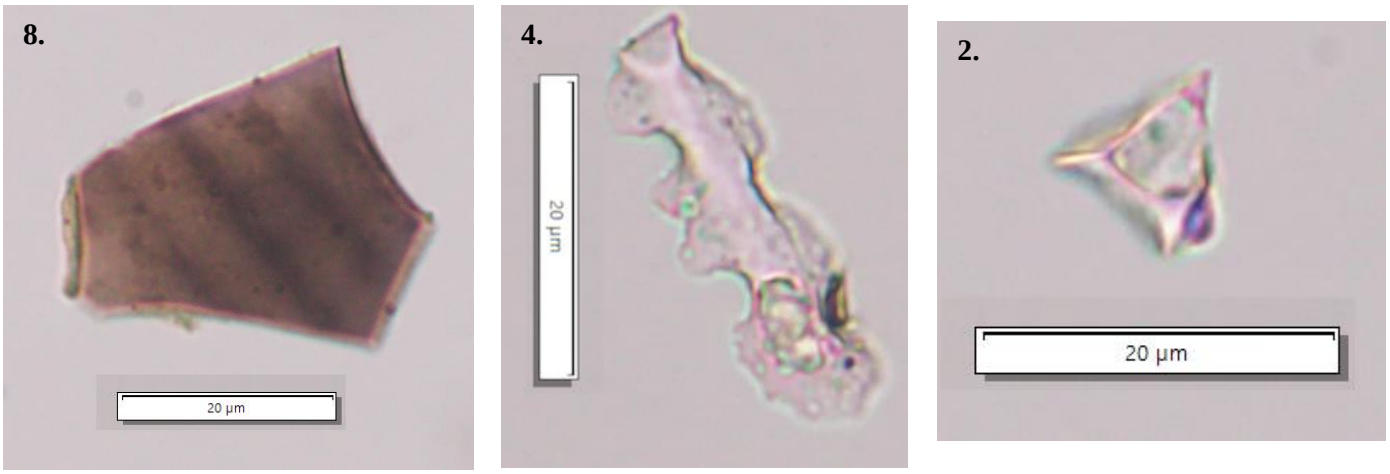
Ryc. 73 Obiekt W próba 1, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_W_1.
Fig. 73 Feature W sample 1: the photo number corresponds to the phytolith number in the table Ka4_2025_W_1.



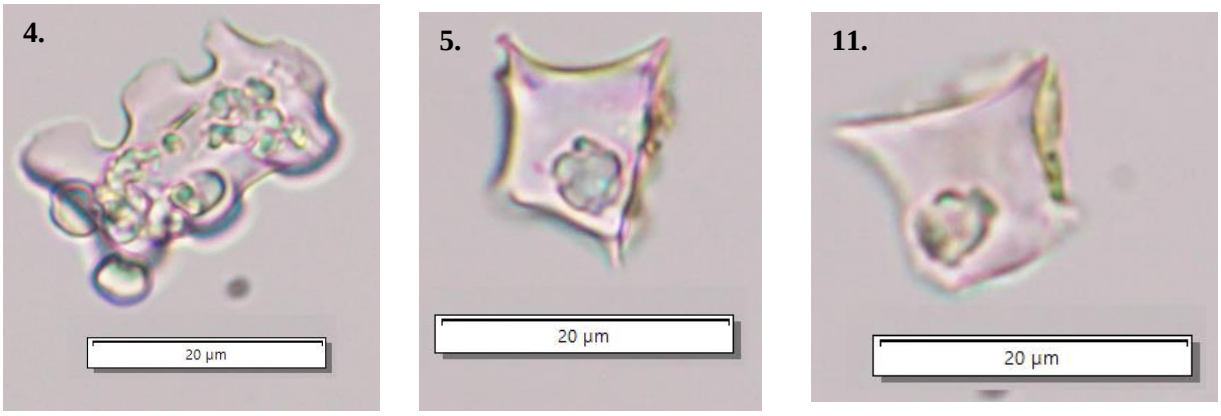
Ryc. 74 Obiekt W próba 2, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_W_2.
Fig. 74 Feature W sample 2: the photo number corresponds to the phytolith number in the table Ka4_2025_W_2.



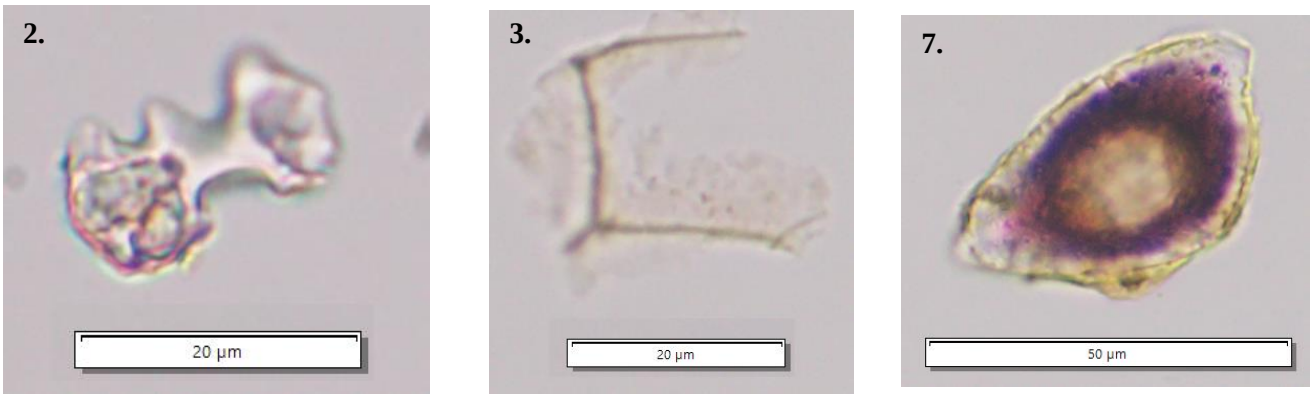
Ryc. 75 Obiekt W próba 5, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_W_5.
Fig. 75 Feature W sample 5: the photo number corresponds to the phytolith number in the table Ka4_2025_W_5.



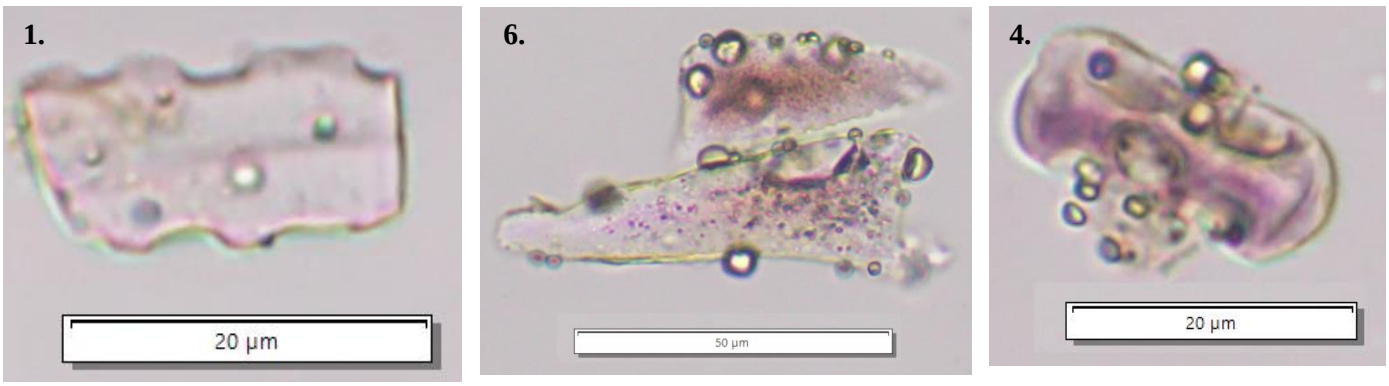
Ryc. 76 Obiekt W próba 6, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_W_6.
Fig. 76 Feature W sample 6: the photo number corresponds to the phytolith number in the table Ka4_2025_W_6.



Ryc. 77 Obiekt W próba 7, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_W_7.
Fig. 77 Feature W sample 7: the photo number corresponds to the phytolith number in the table Ka4_2025_W_7.



Ryc. 78 Obiekt W próba 8, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_W_8.
Fig. 78 Feature W sample 8: the photo number corresponds to the phytolith number in the table Ka4_2025_W_8.



Ryc. 79 Obiekt W próba 10, numery zdjęć odpowiadają numerom fitolitów zidentyfikowanych w tabeli Ka4_2025_W_10.
Fig. 79 Feature W sample 10: the photo number corresponds to the phytolith number in the table Ka4_2025_W_10.

