

# ДАВНЯ ІСТОРИЯ

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## REGARDING ONE FLINT ITEM FROM THE COLLECTION OF THE UPPER PALEOLITHIC SITE KAYSTROVA BALKA IV

*Igor Pistruil*

Odesa Archeological Museum, National Academy of Sciences of Ukraine (Odesa, Ukraine);

Petro Mohyla Black Sea National University (Mykolaiv, Ukraine)

e-mail: [pistruiligor@ukr.net](mailto:pistruiligor@ukr.net)

ORCID: <https://orcid.org/0000-0002-6193-1963>

### ABSTRACT

The Kaystrova Balka IV site was discovered by A.V. Dobrovolsky in Kaystrova Balka in 1933. In 1936, A.N. Rogachev examined the collections from Kaystrova Balka sites and made their technical and typological classification. Then, these materials were transferred to the Odesa State Historical and Archaeological Museum. In 1971, S.V. Smirnov published the flint inventory from the Kaystrova Balka IV site.

**The purpose of the article** is the typological attribution of flint product from the collection of the Upper Paleolithic site of Kaistrova balka IV.

**The scientific novelty.** In the 20<sup>th</sup> century and now, the typological method is widely used for processing archaeological collections. This method is widely used for collections of sites of the Stone Age, when we do not always understand what we are working on. On the basis of the typological analysis of the products of knapping of flint (core, chips, etc.), a reconstruction of the technology of staged primary splitting is proposed, thanks to which a new typological attribution of the product is proved.

**Conclusions.** In general terms, it is possible to reconstruct the technology of primary splitting at the Kaystrova Balka IV site. At the first stage, the platform was prepared (most likely with one strike). At the second stage, the blanks were spalled. The spalling could also occur without the initial preparation of the rib, which is typical for the prismatic technique. At the third stage, one massive spall was made. After that, further splitting could occur with or without making a rib.

This reconstruction of primary splitting at the Kaystrova Balka IV site allows us to assume that the examined item appeared at the first or second stage. Thus, this item is a flake, which was chipped from the nucleus at the very beginning of the primary splitting.

**Keywords:** Dnieper Nadporozhye region, Kaystrova Balka, Upper Paleolithic, knapping, flake

## ПРО ОДНЕ КРЕМЕНЕВЕ ЗНАРЯДДЯ З КОЛЕКЦІЇ СТОЯНКИ ВЕРХНЬОГО ПАЛЕОЛІТУ КАЙСТРОВА БАЛКА IV

*Ігор Піструїл*

Одеський археологічний музей НАН України (Одеса, Україна)  
Чорноморський національний університет імені Петра Могили (Миколаїв, Україна)  
e-mail: pistruiligor@ukr.net  
ORCID: <https://orcid.org/0000-0002-6193-1963>

### АНОТАЦІЯ

Стоянка Кайстрова балка IV була відкрита та досліджена А.В. Добровольським в Кайстровій балці у 1933 р. Колекцію стоянки опрацював у 1936 р. А.Н. Рогачев. Після цього матеріали пам'ятки з техніко-типологічною класифікацією А.Н. Рогачева були передані до Одеського державного історико-археологічного музею. У 1973 р. матеріали стоянки опублікував С.В. Смирнов.

**Метою статті** є типологічна атрибуція крем'яного виробу з колекції верхньопалеолітичної стоянки Кайстрова балка IV.

**Наукова новизна.** В ХХ ст. і зараз для опрацювання археологічних колекцій поширений типологічний метод. Широко використовується цей метод і для колекцій пам'яток кам'яного віку, коли ми не завжди розуміємо над чим працюємо. На підставі типологічного аналізу продуктів первинного розщеплення кременю (нуклеусів, сколів тощо) запропонована реконструкція технології поетапного первинного розщеплення, завдяки чому доводиться нова типологічна атрибуція виробу.

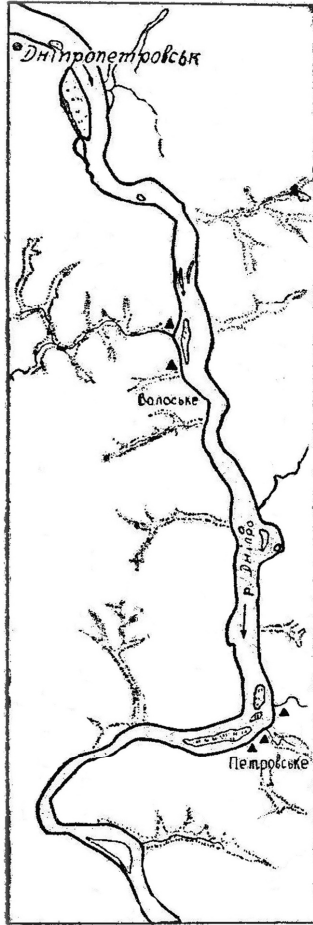
**Висновки.** В загальних рисах, можливо реконструювати техніку первинного розщеплення на стоянці Кайстрова балка IV. На першій стадії проходило формування ударної площадки (вірогідніше, за допомогою одного сколу). На другому етапі проходило сколювання заготовок. На третьому етапі, площина сколювання поновлювалась за допомогою сколювання одного масивного сколу. Після цього, подальше розщеплення могло проходити як з формуванням ребра, так і без нього.

З наведеної реконструкції первинного розщеплення на стоянці Кайстрова балка IV можна припустити, що виріб, який аналізується з'являється на першому або початку другого етапу. Таким чином, це є відщеп, що «знятий» з нуклеуса на самому початку розщеплення.

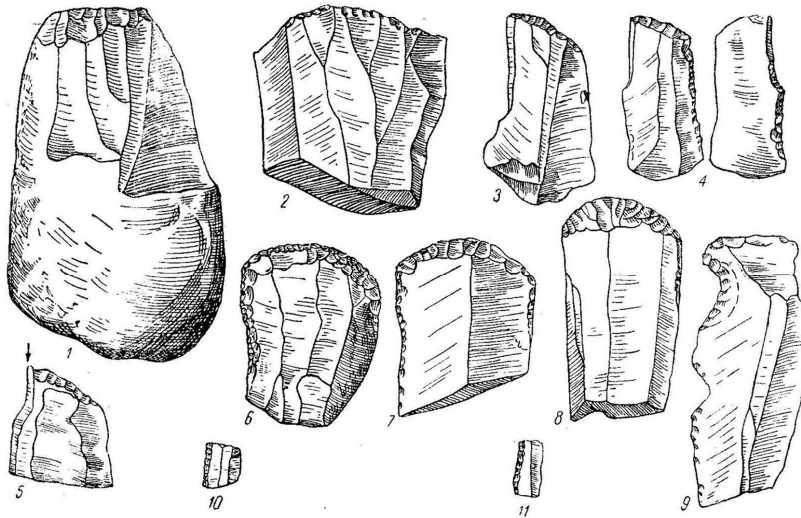
**Ключові слова:** Дніпровське Надпоріжжя, Кайстрова балка, верхній палеоліт, техніка первинного розщеплення, відщеп

The Kaystrova Balka IV site was discovered by A.V. Dobrovolsky in Kaystrova Balka in 1933. The site is located on the left bank of the Dnieper River in Zaporizhzhia oblast, 30-35 km south of the city of Dnipro (fig. 1.1). Here, in 1931, during the construction of the *Dneproges*, 3 small Stone Age sites were discovered and examined. The collections of these sites are few: from several dozens to several hundreds of flint and bone items. During an additional survey of the banks of Kaystrova Balka, partially destroyed after water raising in the reservoir, A.V. Dobrovolsky discovered and then examined the 4<sup>th</sup> site<sup>1</sup>. As a result of the excavations, A.V. Dobrovolsky has identified 10 cultural horizons with a similar inventory. In total, during the excavations of Kaystrova Balka IV site, ca. 7,000 flint items were collected.

<sup>1</sup> Рогачев О.М. Палеолітичні стоянки в Кайстровій балці // Палеоліт і неоліт України. 1949. Т. 1. Вип. IV. С. 249-250; Смирнов С.В. Палеоліт Дніпровського Надпоріжжя. Київ: Наукова думка, 1973. С. 88.



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Fig. 1. Kaystrova Balka IV site (according to Rogachev, 1949):  
 1 – the layout of the Stone Age sites in Kaystrova Balka near the village of Petrovskoye;  
 2 – flint inventory from the Kaystrova Balka IV site

In 1936, A.N. Rogachev examined the collections from Kaystrova Balka sites and made their technical and typological classification. Then, these materials were transferred to the Odesa State Historical and Archaeological Museum.

For the first time, the materials from Kaystrova Balka sites were published in 1949<sup>2</sup>. In this publication, A.N. Rogachev used A.V. Dobrovolsky's documentation and paid special attention to the location, stratigraphy, and planigraphy of the sites. He concluded that instead of 10 cultural horizons identified by A.V. Dobrovolsky, there was only one heavily destroyed cultural layer on the Kaystrova Balka IV site. A.N. Rogachev described the flint inventory from the sites in general terms. For Kaystrova Balka IV, he gave one drawing with 11 items<sup>3</sup>. Later, P.I. Boriskovsky published this drawing in a monograph on the Paleolithic of Ukraine<sup>4</sup>.

In 1971, S.V. Smirnov published the flint inventory from the Kaystrova Balka IV site<sup>5</sup>. And in 1973, the materials from the Kaystrova Balka sites were published in his monograph on the Paleolithic of the *Dnieper Nadporozhye* region<sup>6</sup>. Subsequently, these materials were cited in academic papers to demonstrate the development of the Upper Paleolithic industries of the Dnieper region<sup>7</sup>.

Special attention should be paid to an item from the Kaystrova Balka IV site. For the first time, it was published by A.N. Rogachev<sup>8</sup>, identified as a core (fig. 1.2). One projection of the item was drawn. Based on the drawing, one can indeed **assume** that this is a single-platform core at the initial stage of splitting, made from an elongated flint pebble, almost cylindrical in shape. The method of making the striking platform is not indicated in the drawing, but the reduction of the cornice is provided. A series of blade spalls were cleaved from the striking platform. They reached the middle of the pebbles, where they broke off. Such an unsuccessful system of making spalls, apparently, was the reason for rejecting this item. That is all that can be seen on the drawing.

As already mentioned, later, A.N. Rogachev's drawing of the inventory from Kaystrova Balka IV site was published by P.I. Boriskovsky.

In the 1970s, materials from the Upper Paleolithic sites in Kaystrova Balka were studied by S.V. Smirnov. His publication has also a drawing of this item<sup>9</sup>. S.V. Smirnov published the same drawing in his monograph<sup>10</sup>. As well as A.N. Rogachev, S.V. Smirnov identified it as a core and placed its drawing on the plate with cores (fig. 2.8). Unlike A.N. Rogachev, S.V. Smirnov depicted two projections of the item. Judging by the profile, the item was made from rather flat pebbles or a flat piece of flint. According to other S.V. Smirnov's drawings, core made from the fragments are present in the Kaystrova Balka IV collection (fig. 2).

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<sup>2</sup> *Рогачев О.М.* Палеолітичні стоянки... С. 249-263.

<sup>3</sup> *Ibid.* Рис. 8.

<sup>4</sup> *Борисковский П.И.* Палеолит Украины // *Материалы и исследования по археологии СССР.* Москва-Ленинград: Издательство академии наук, 1953. № 40. С. 383.

<sup>5</sup> *Смирнов С.В.* Палеолитическое местонахождение Кайстрова балка IV // *Матеріали з археології Північного Причорномор'я.* 1971. Вип. 7. С. 164-172.

<sup>6</sup> *Смирнов С.В.* Палеоліт... С. 88-99, 135-137.

<sup>7</sup> *See: Борисковский П.И.* (ред.). Палеолит СССР. Москва: Наука, 1984. С. 220; *Нужный Д.Ю.* Верхній палеоліт Західної та Північної України (техніко-типологічна варіабельність та періодизація). Київ: ФОП Філюк О., 2015. С. 379.

<sup>8</sup> *Рогачев О.М.* Палеолітичні стоянки... Рис. 8.1.

<sup>9</sup> *Смирнов С.В.* Палеолитическое местонахождение... Рис. 6.8.

<sup>10</sup> *Смирнов С.В.* Палеоліт... Рис. 27.8.

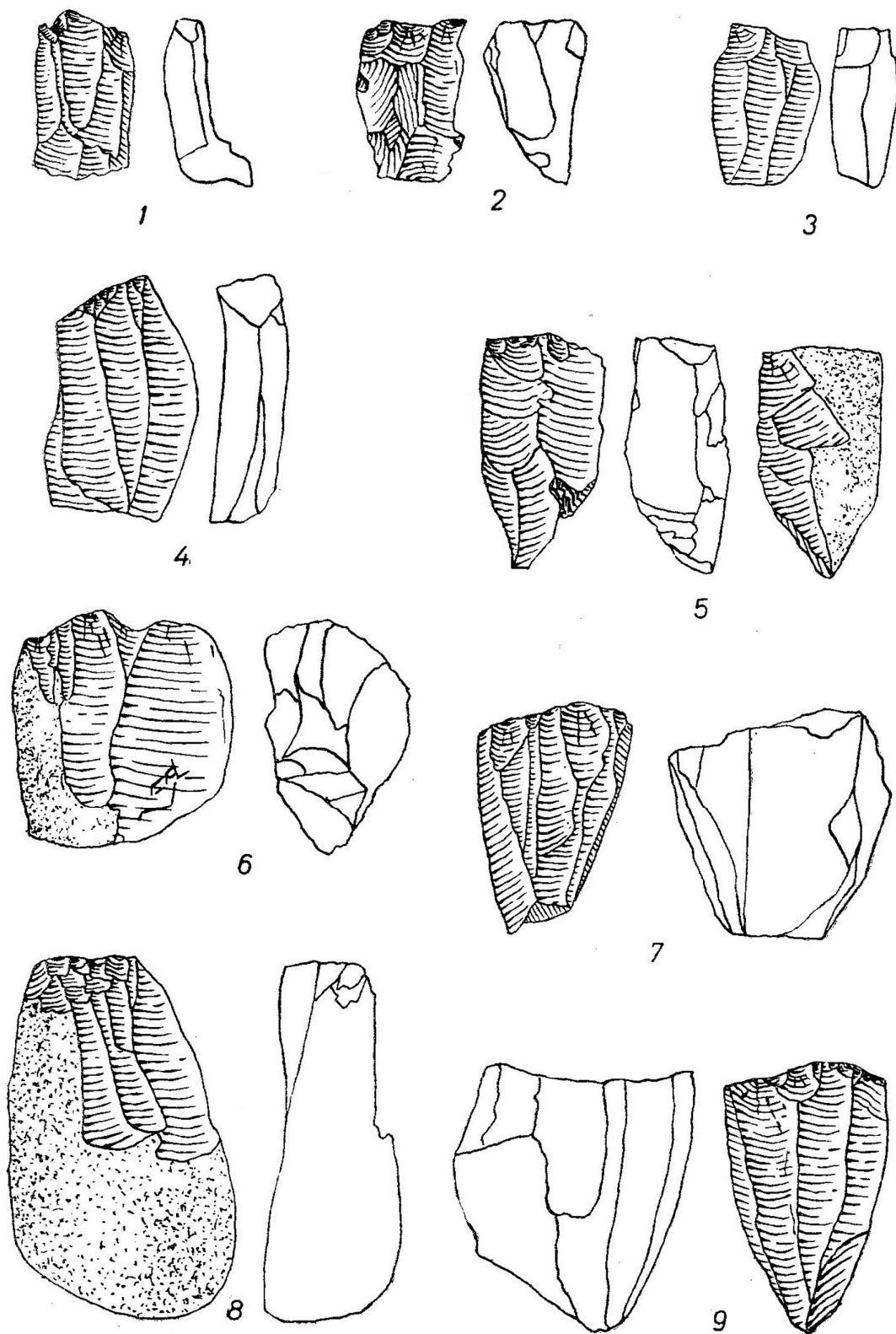


Fig. 2. Kaystrova Balka IV site. Cores. (according to Smirnov, 1971)

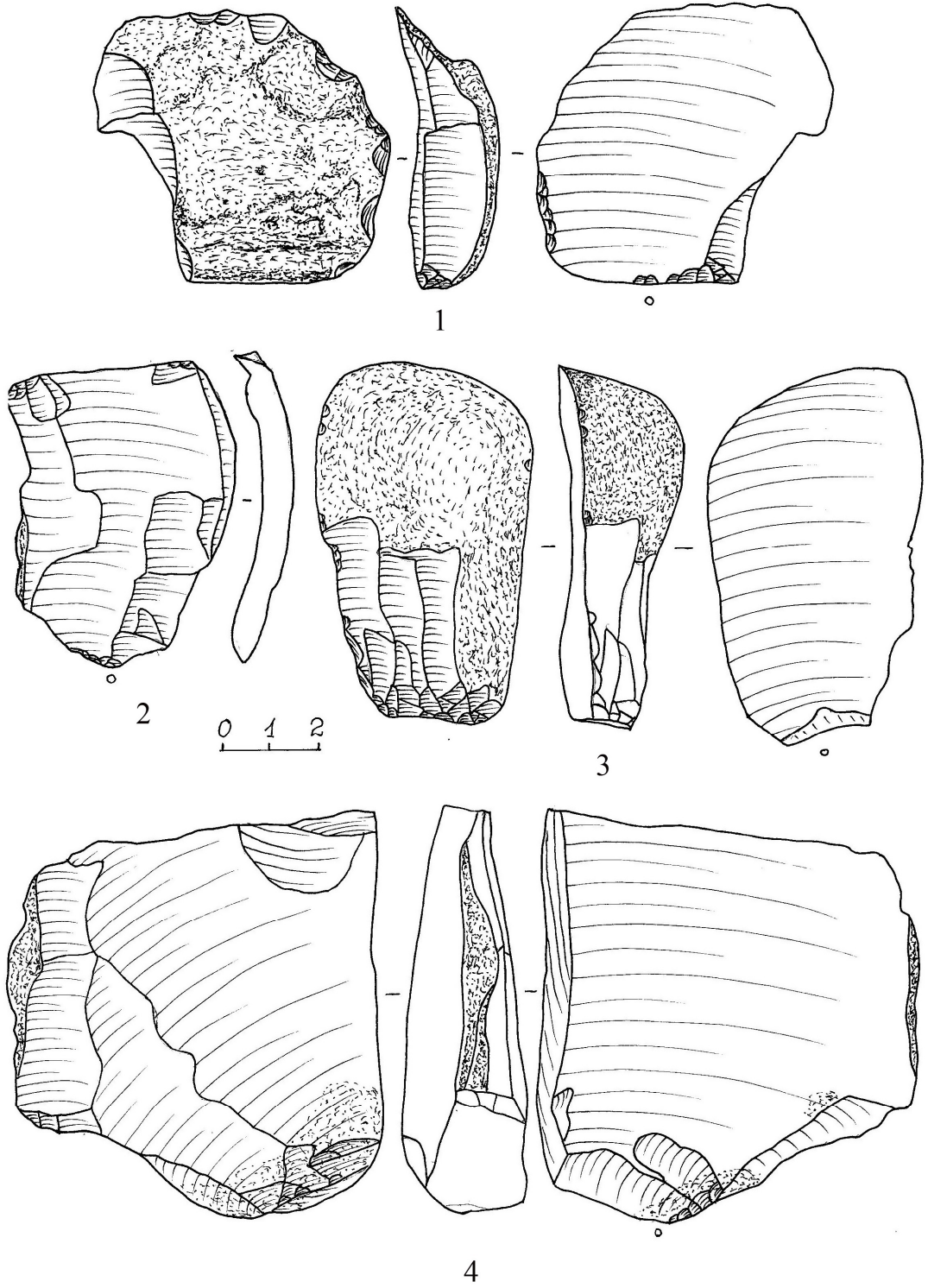


Fig. 3. Kaystrova Balka IV site. Flakes.

Thus, both researchers who worked with the archaeological material from the site identified this item as a core.

The author of this paper has also processed the collection from the Kaystrova Balka IV site, including this item. It turned out to be a large spall (flake) with dimensions of 7,8x4,5x2,2 cm (fig. 3.3). Dorsal surface has the negatives of removed elongated spalls. They reach the middle of the item, where the spalls broke off. The rest of the dorsal surface is encrusted. The ventral surface has no traces of processing. A large bulb of percussion is present. Judging by the remains of striking platform, it can be assumed that it was made by one spall.

More precise attribution of this item requires the examination of the entire collection from this site (ca. 7,000 pieces) and, first of all, the products of knapping (core, flakes, blades). The collection has the entire cycle of flint processing – from amorphous fragments to various products with secondary processing. There are few core – ca. 10 pieces. One gets the impression that several large flint pebbles, which were used in the technological process, were brought to the site. However, it should be noted that A.V. Dobrovolsky perhaps has not excavated the site completely. After World War II, a large number of flint items were collected near the site. This locality was named Kaystrova Balka VI<sup>11</sup>. At the same time, some researchers suggested that this locality represents the remains of the Kaystrova Balka IV site washed out by the water reservoir<sup>12</sup>.

The core are one- and two-platformed, with dimensions of up to 6 cm. The splitting technique is prismatic. There are negatives from spalling the plates from 1.8 to 0.7 cm on the cores (fig. 4). The larger part of the collection from the Kaystrova Balka IV site, as well as from other Upper Paleolithic sites, consists of flakes and blades (more than 6,000 pieces), with the flakes being predominant. Their sizes are different. Small flakes and scales, which are production wastes, predominate. At the same time, the collection contains a few rather large and massive flakes (ca. 150 pieces), ranging in size from 4 to 11 cm. Pebble crust is present on the dorsal surface of most of these flakes. Blades are also quite diverse in terms of size. Those up to 2 cm predominate. However, as with the flakes, there is a series of large and massive blades (ca. 200 pieces), ranging from 2 to 4.8 cm in width. Their length reaches 8-10 cm. Some of them have remnants of a pebble crust on the dorsal surface.

The vast majority of items with secondary processing (burins, scrapers, points, blades, and flakes with retouching, push-planes) were made on large blanks (mostly blades). Blades (1-1.2 cm wide) were used mainly for making truncated blades, blades with retouching, and/or blunt edges.

Thus, in general terms, it is possible to reconstruct the technology of knapping at the Kaystrova Balka IV site. Flint pebbles or large fragments (judging by the primary spalls, more than 10 cm) were brought to the site. Flint testing and initial preparation for splitting took place directly on the site. At the first stage, the platform was prepared (most likely with one strike). If it is a fragment, a suitable surface could be used as a platform, or a new platform could be additionally made. At the second stage, the blanks were spalled. The spalling could also occur without the initial preparation of the rib, which is typical for the prismatic technique. During the

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<sup>11</sup> Смирнов С.В. Палеоліт... С. 82-88.

<sup>12</sup> Нужний Д.Ю. Верхній палеоліт... С. 380.



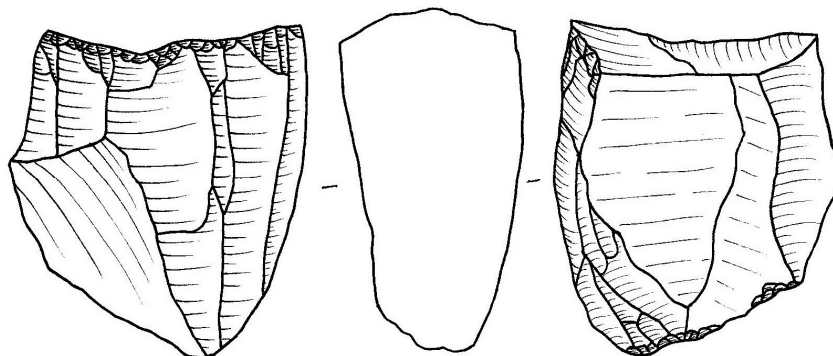
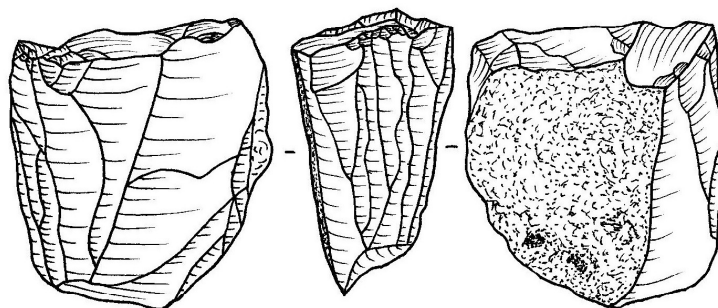
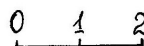
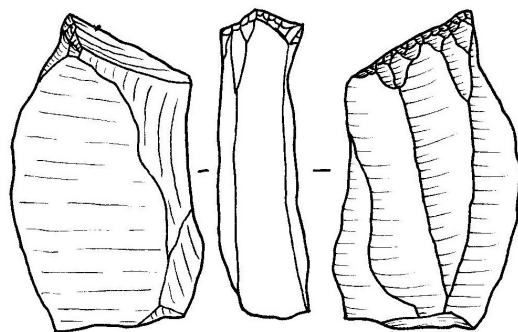
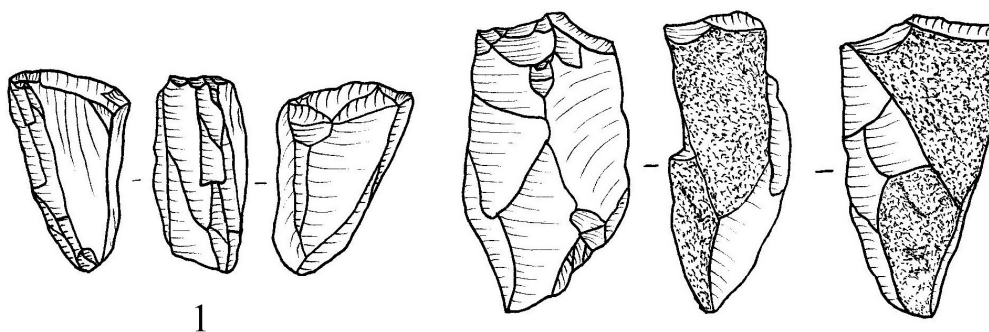


Fig. 4. Kaystrova Balka IV site. Cores.



splitting, flakes could break off, which prevented further use of the blank. At the third stage, one massive spall was made. After that, further splitting could occur with or without making a rib. Blades 1-1.5 cm wide were chipped off for making blades with retouching and/or blunt edges and other small tools.

This reconstruction of knapping at the Kaystrova Balka IV site allows us to assume that the examined item appeared at the first or second stage. Thus, this item is a flake, which was chipped from the core at the very beginning of the primary splitting.

#### REFERENCES

- Boriskovskii, P.I.** (1953). Paleolit Ukrainy [Paleolithic of Ukraine]. *Materialy i issledovaniia po arkhologii SSSR, 40*. Moskva-Leningrad: Izdatelstvo akademii nauk [in Russian].
- Boriskovskii, P.I.** (Ed.) (1984). *Paleolit SSSR* [Paleolithic of USSR]. Moskva: Nauka [in Russian].
- Nuzhnyi, D.Yu.** (2015). *Verkhni paleolit Zakhidnoi ta Pivnichnoi Ukrainy (tekhniko-typolohichna variabelnist ta periodyzatsiia)* [Upper Paleolithic of Western and Northern Ukraine (technical-typological variability and periodization)]. Kyiv: FOP Filiuk O. [in Ukrainian].
- Rohachev, O.M.** (1949). Paleolitychni stoianky v Kaistrovii baltsi [Paleolithic sites in Kaistrava Balka]. *Paleolit i neolit Ukrainy, vol.1/IV*, 249-263 [in Ukrainian].
- Smirnov, S.V.** (1971). Paleoliticheskoe mestonakhozhdenie Kaistrova balka IV [Paleolithic site Kaistrova Balka IV]. *Materialy z arkhologii Pivnichnoho Prychornomoria, 7*, 164-172 [in Russian].
- Smyrnov, S.V.** (1973). *Paleolit Dniprovskoho Nadporizhzhia* [Paleolithic of Dnipro Nadporizhe]. Kyiv: Naukova dumka [in Ukrainian].

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