

relief against the dark shiny background of the rock by a process, which demanded hundreds and thousands of regular beats of the sharp edge of stone swingle. Thus the surface of the picture was covered with thousands of lines made up of point-like small hollows, the edges of which assumed the form of small teeth. The depth of the relief extended to several millimetres from the surface of the stone, and, in exceptional cases —1—3 centimetres. This technique of execution we conventionally term "point-beat", as shown in illustrations 3—7. Over thousands of years the "point-beat" technique developed considerably and attained accomplishment requiring great deal of experience, training and skill but basically remaining the same. The present volume dwells on the main changes.

In the late declining phase of rock-carving art one notes the appearance of purely linear technique, which however does not find wide distribution and attains limited development. This technique seemingly comes into being under the impact of the graphic art of metal ornaments (Figs. 13—15). The sole application of the point-beat technique, however, could not achieve the refined expressiveness, dynamism, compositional and artistic accomplishment which had been often witnessed in the wonderful rock carvings for many centuries.

Close examination of rock carvings revealed the basic technical-artistic skill of their execution. It was established that the drawing-

sketch which lay at the foundation of the compositional conception, structure and the expression of the stylistic peculiarities of the figures underlay the point-beat surface. This work discusses several such rock carvings done at various periods (Figs. 8—12), which clearly indicate the simultaneous application of both technical devices. Strangely, the application of both of those devices has enabled the pre-historic artist to conceive such diversity and richness of style the like of which can hardly be traced even in today's art. Stylization in Armenian rock art was characteristic of everything: the figures of thousands of animals, men, gods, objects and articles. Accordingly the stylistic changes are often reliably traceable on the chronological scale. For instance, the figure of the bezoar goat, most widespread in Armenian rock carvings, stands out in several basic, stylistic-chronological groups. Table I shows that this figure undergoes stylistic and chronological transformations during the late-neolithic, early and middle Bronze, late Bronze—and early Iron-Ages. It is only in the third millennium that the B and C Earth-symbol-triangle styles, with numerous variations supplement the basic A I sub-style; they lie at the root of the lightning-flash sign which had completely established itself by that time.

The volume also deals with the stylistic peculiarities in portrayals of the bull and man (Tables II and III), this time in association with their functional or mythological meaning.

## CHAPTER TWO

### THE PROBLEM OF CHRONOLOGY OF ROCK CARVINGS.

The technical-stylistic analysis of data is of substantial value in the scientific classification of monuments, but does not offer a sound basis for their absolute or comparative dating. For the clarification of the latter problem of primary importance are those rock fragments (the old, at times totally or partially faded, barely visible) the pictures on which were covered, with new ones or augmented through the centuries often changing their original shape

and meaning. This work discusses in detail such rock carvings in their distinct chronological succession. The figures of the 5th and 4th millennia B. C. lay under the various figures of the 3rd millennium, those of the 3rd under pictures of the 2nd, and those of the 2nd are covered with carvings of the first millennium (Figs. 16—20).

Monuments of this type allow the determination of the inner stratification and com-

parative succession of rock carvings according to millennia, and often to semi-millennia and centuries. In order to justify the general limits of the chronology, specifying and further differentiating the proposed scale the method of comparative dating was devised since the groups of rock-carvings of the Gegham mountain range do not occur in association with stratified monuments which would serve as chronological determinants. That is why the data of the rock carvings of the Gegham mountain range are compared to those contemporaneous rock carvings or such monuments of pre-historic art that represent the general culture of the tribes creating that great pre-historic art in the Ararat valley or in such contiguous areas whose inhabitants, even if unrelated to the population of the Gegham mountain range, at the time stood, nevertheless, on the same social and economic, cultural and intellectual level of development. In this way the groups of figures are divided chronologically into the Late neolithic-aeneolithic, early Bronze Age, Middle Bronze Age, Late Bronze Age and Early Iron Age groups.

#### THE GROUP OF FIGURES OF THE LATE NEOLITHIC—AENEOLITHIC PERIOD (5th-4th millennia B. C.) (Tables 16—17, 67—72, 78—3)

The group is characterized by outsize ancient A style figures and primitive technique and by simplicity of hunting scenes. The areas where this group is represented have yielded stone implements of the Late neolithic-aeneolithic period (Table V) with parallels in the V—IV mil. settlements of the Ararat valley (Khatunarkh, Teghout) and in contemporaneous dwelling sites on the borderline between the Armenian and Georgian SSR (Imiris-gora, etc.) and other monuments of the Middle East and Asia Minor. The figures of the gods of hunt which first appeared on the rock images of this group (Tables 67—72) have their parallels in the same context in Imiris-gora which are radio-carbon dated  $4350 \pm 120$  and in the late aeneolithic phase of Yaniktepe settlement (Lake Kapoutan) which dates from the middle of the 4th millennium B. C. There are numerous other similar finds which are discussed at

length in the present work and are included in the time range Imiris-gora-Yanik.

#### EARLY BRONZE AGE GROUP OF FIGURES (3rd millennium B. C.) (Tables 1,2; 9—1; 15—4; 20—1; 33—2; 37—1; 62—3; 68—2; 29; 69—70; 72—75).

The group is characterized by A1 style images, compositional complexity, a much more refined execution of figures and small dimensions. Numerous strictly stylized animal figures, the religious ornamentation of well-represented earthenware discovered in the Ararat valley (Shengavit, Jerahovit) and other settlements of Armenia of the 3rd millennium B. C. provide reliable criteria for dating this group of images. The former quite coincide with the carvings under consideration and are encountered only in the monuments of the III millennium B. C. (Table IV, Figs. 1, 2, 4, 7). The monuments of the first and second halves of the third millennium B. C. are traced by comparing the animal figures of the rock carvings of this group with the ornamental motifs of earthenware from the Pular settlement in the plain of Kharberd. The relevant layers of Pular are dated by the radio-carbon method to the mid-third millennium B. C. ( $2420 \pm 200$  2470/).

#### GROUP OF FIGURES OF THE FIRST HALF OF THE 2ND MILLENNIUM B. C.

(Table IV, Figs. 8—13; table 39—1). This group is characterized by A2 style images, very refined technique of execution, multi-figure complex composition and is dated to the 19th-15th centuries B. C. by means of comparison with the bird and deer figures on the painted pottery of the Ararat valley and Lake Sevan Basin (Table VI), as well as with the cult figures of bulls on vishap-stellae (dragon-stellae) (Table VII) from the same Gegham mountain range. The figures of hunters of a certain style, locally typical of this time range, are likewise considered

#### GROUP OF FIGURES OF THE 2ND HALF OF THE SECOND MILLENNIUM B. C.

This group has a much broader and more reliable range of comparison. The animal and



human figures encountered in those compositions, as well as the very compositional structures of the scenery have exact parallels in the 14th-13th century bronze figurines (Tables 54, 55, 58—2) of Lechashen, the fortress of Lori, Artik, in the motifs and linear ornaments of quite reliably dated pottery of the Late Bronze Age, and the bronze belts of the early, middle and late Bronze Age, (Lechashen Noyemberian, Ghedabek, etc.). Another group of parallels is also available; it involves the types of armour represented on rock carvings (Tables 40—2; 47). They duplicate the armour and defensive weapons of definite dating, dis-

covered in the necropolises and habitations of the same area.

#### GROUP OF FIGURES OF THE EARLY IRON AGE (9th-6th centuries B. C.) (Table VIII).

They are of lesser consequence as to artistic composition, since rock carving was on the decline in that area of Armenia during the period in question. The dating of this group of figures was established by comparing the unique styles of human and animal figures, and the reliefs of Shamiram as well as bronze belts, etc.

### CHAPTER THREE

#### THE NARRATIVE CONTEXT OF HUNTING SCENES (Tables 16—60)

It was established in the preceding chapter that the prehistoric rock carving in Armenia continuously evolved over four thousand years. Through the ages at the hands of the succeeding generations rock-carvings constantly changed and became more complex; the groups of figures were based on the productive, religious and ideological norms of early farming-hunting-herding tribes. Most of the rock carvings portrayed various hunting scenes, since as husbandry and herding flourished, hunting witnessed a new rise, practiced mostly in the summer months in the Alpine and sub-Alpine regions (just where the carvings were situated), areas abounding with birds and other wildlife. The hunting scenes had a magical significance and were intended to bring greater success in hunting. The present chapter briefly describes these types of scenes in chronological and topical order, and gives possible interpretations. In this way the subtlest and most refined forms and methods of hunting are recognized, along with the general rich depiction of the scenes and their aims. A scrupulous examination of hunting scenes results in the discovery of basic problems which lie at the very root of economy i. e. the development of the material life of late pre-historic period. Some of these essential problems are listed below. Hunting was not a goal in itself to our ances-

tors; it was subordinate to the general economy of animal husbandry and farming, and had quite a differentiated character. This circumstance accounts for the diverse forms and ways of hunting. Bare hands, the rope, clubs, traps, hollows, nets, etc., were most often used for catching wild animals. Such scenes predominate over the rest. Thus, the intention was to add these animals to or improve the communal herd. Hunting done by means of the bow and arrow, spears and hatchets was aimed at preserving the communal herd from beasts of prey and procuring meat. The rock pictures of the early period enable us to assert that the bezoar goat was the first animal to be domesticated in Armenia. The hunting scenes of those animals form a majority and their bone fossils predominate in the animal remnants of ancient settlements. Equally old is the domestication of wild aurochs and the Armenian mountain sheep. This domestication is likely to date back to the 7th and 6th millennia B. C., though the reflection in the rock carvings comes not earlier than from the 5th millennium B. C. Transcaucasian archaeology provides evidence to the effect that sheep predominated in the communal flocks of the 3rd millennium B. C., but this development was not altogether reflected in the art of the rock carvings. This fact may be accounted for by lingering artis-