

**GRAFIČKI PRIKAZ STRUKTURNIH ODNOSA U SASTOJINI  
PRAŠUME BUKVE I JELE (*Abieti-Fagetum illyricum*, Horv. 38)  
“ČORKOVA UVALA” NA PODRUČJU NACIONALNOG  
PARKA PLITVIČKA JEZERA**

GRAPHICAL PRESENTATION OF STRUCTURAL RELATIONS  
IN A BEECH AND FIR STAND (*Abieti-Fagetum illyricum*, Horv. 38)  
IN THE VIRGIN FOREST OF “ČORKOVA UVALA”  
IN PLITVICE LAKES NATIONAL PARK

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Pokusnu plohu u sastojini prašume bukve i jele (*Abieti-Fagetum illyricum*, Horv. 38) “Čorkova uvala” osnovao je akademik prof. dr. Milan Anić 1957. godine i danas je to najstariji pokusni objekt u nas, na kojemu se sukcesivno prate struktura i dinamika razvoja prašume.

Kako sam tijekom istraživanja sudjelovao u potankim izmjerama osnovane pokusne plohe, u ovome članku dajemo nekoliko grafičkih priloga koji do sada nisu, ili su djelomično objavljeni.

Površina pokusne plohe iznosi 1 ha, a postavljena je u obliku kvadrata sa stranicama, dužine 100 m i razdijeljena na sto kvadrata od po 10 m x 10 m, koji su unešeni u nacrt i služe kao osnovna jedinica kod snimanja detalja na pokusnoj plohi, kao što su kamenitost terena, razmještaj stabla, izohipse na jedan metar visinske razlike, prirodom izlučena stabla i dr. Prilikom izmjera prsnog promjera i visine svako je stablo obrojčano. Oblik krošnje definirane je s četiri međusobno okomitih polumjera, a smjer ekscentričnosti posebno je označen.

Obrada snimljenih podataka obavljena je tijekom vremena standardnim metodama, a rezultati su predočeni tablično i grafički. Slika sastojine grafički je prikazana horizontalnom projekcijom i profilom (Anić, M. 1965, Prpić, B. 1979).

Da bi se dobila što zornija slika sastojine, koja bi vizualno bila što bliža stvarnom izgledu, prišlo se u ovom radu prikazu sastojine iz “ptičje perspektive”. Odozgo, pa malo udesno. Uvedena je treća dimenzija. Razmještaj stabala, međusobni odnos krošanja, slojevitost krošanja – svi su ti elementi zorniji u ovakovom načinu prikazivanja. Pritom su visine stabala zadržane u istom mjerilu, kako bi se omogućilo uspoređivanje i očitavanje konkretnih visina.

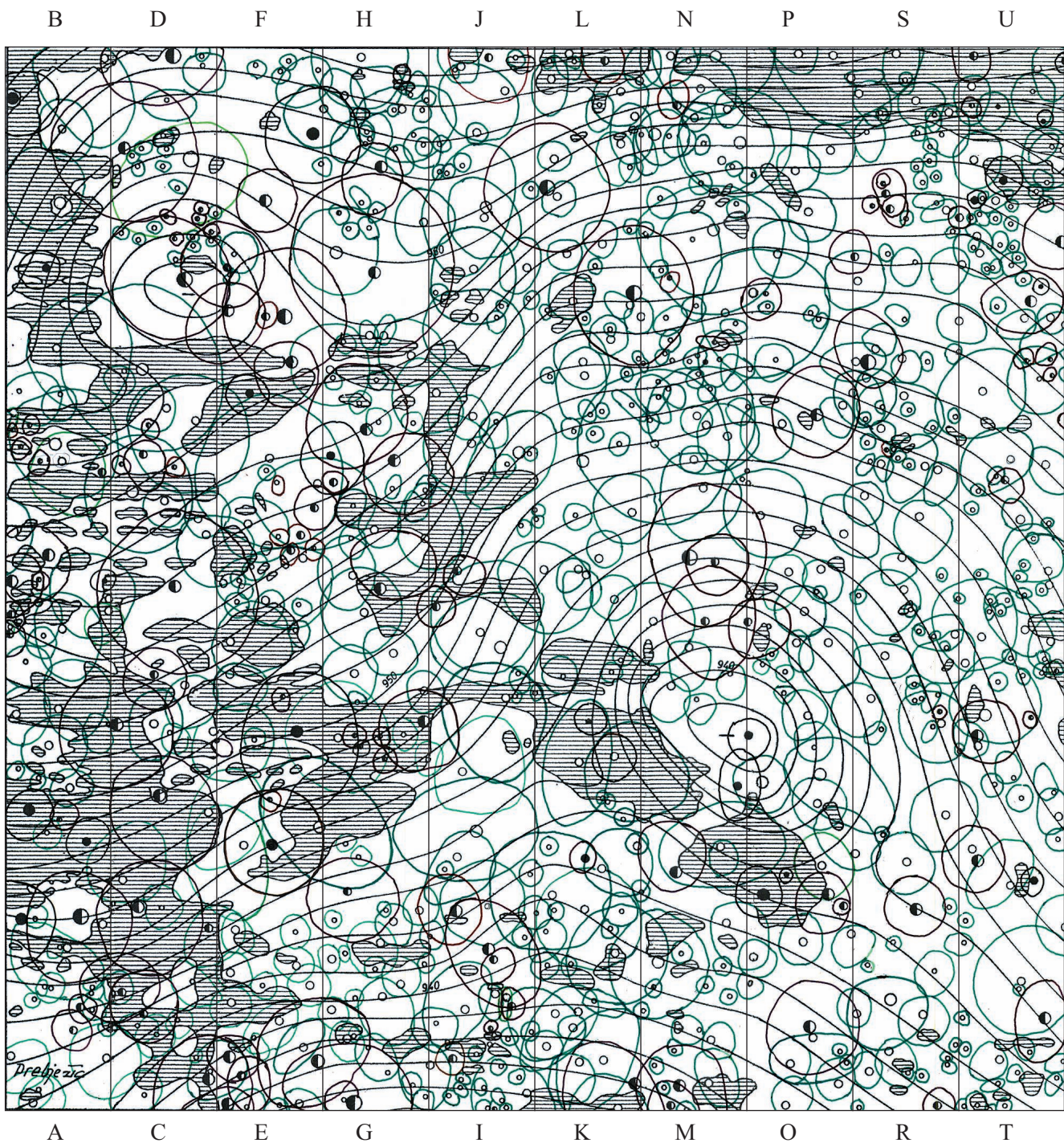
Odnosna je sastojina u ovom radu prikazana s deset profila u spomenutoj tehnici, svaki površine 10 m x 100 m. Njihov položaj na pokusnoj plohi prikazan je na slici 1. Uz svaki je profil prikazana i njegova horizontalna projekcija (slika 2–11). Na slici 12. prikazana je projekcija stojećih i ležećih odumrlih stabala.

Objedinjeni pokazani profili rezultirali su preglednom slikom iz “ptičje perspektive” cijele sastojine na pokusnoj plohi u prašumi “Čorkova uvala” (slika 13).

Pojedinačni profili i pregledna slika zapravo su grafikoni sastojine na pokusnoj plohi, s točno određenim koordinatama i dimenzijama i onog najmanjeg stabalca. A tih je stabala i stabalaca bilo 769.

Bila bi to slika strukturnih odnosa stabala na pokusnoj plohi u sastojini prašume “Čorkova uvala” sa stanjem 1957. godine, a kakva je ona danas, pokazat će, zahvaljujući kontinuitetu istraživačkog rada Zavoda za ekologiju i uzgajanje šuma Šumarskog fakulteta Sveučilišta u Zagrebu, ovogodišnja izmjera.

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Projekcija žilišta za prsne promjere, cm  
 Projection of root butt for breast diameters, cm

<10	11-50	51-100	101<
◦	◦	◐	◑
◌	◌	◍	◎
•	•	●	●

Legenda – Key:

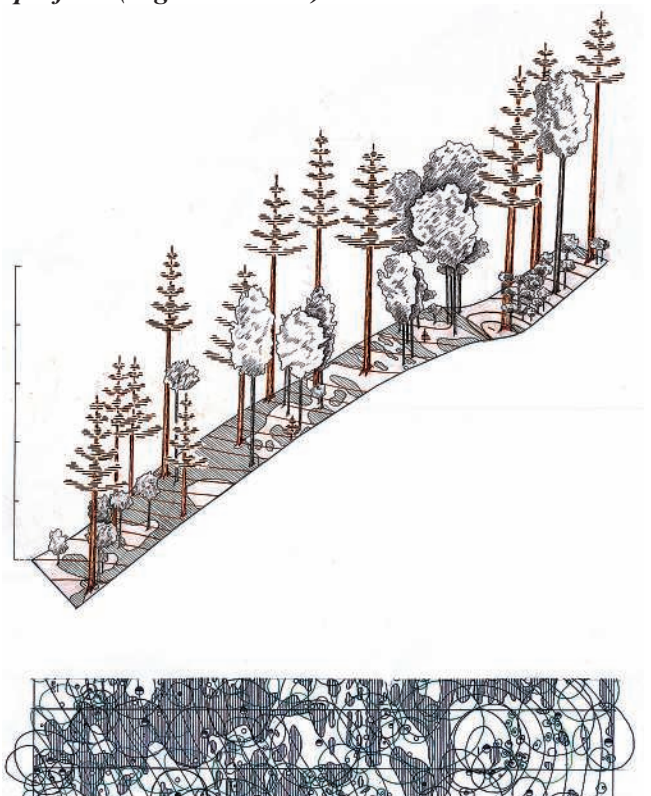
- slojnice – contour lines
- kamenito – stony
- Abies alba* Mill.
- Fagus sylvatica* L.
- Picea abies* Karst.

Slika 1. Položaj uzdužnih profila na pokusnoj plohi  
 Figure 1 The position of longitudinal profiles in the sample plot

**Pojedinačni uzdužni profile sastojine (sl. 2 – 11)**  
*Individual longitudinal stand profiles (Figures 2 – 11)*



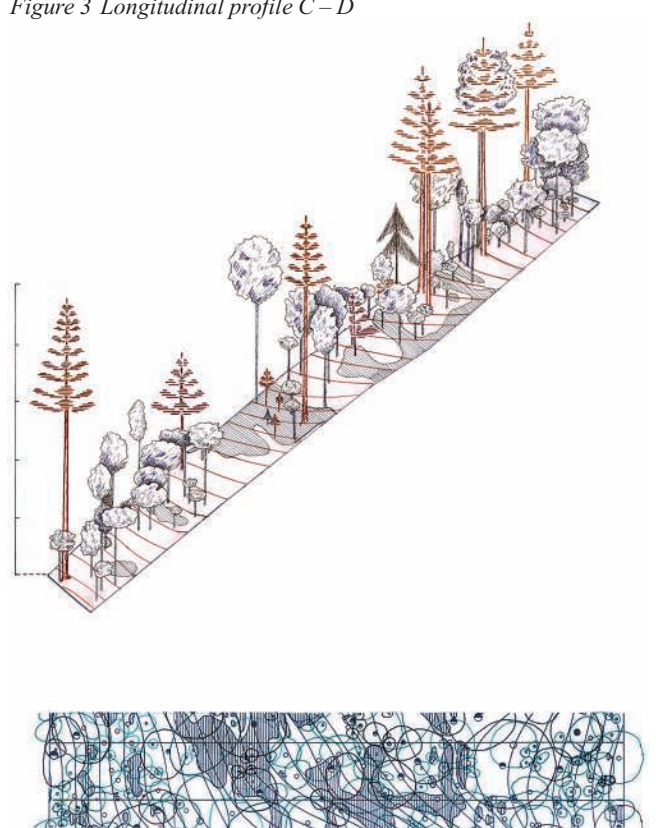
Slika 2. Uzdužni profil A – B  
Figure 2 Longitudinal profile A – B



Slika 3. Uzdužni profil C – D  
Figure 3 Longitudinal profile C – D



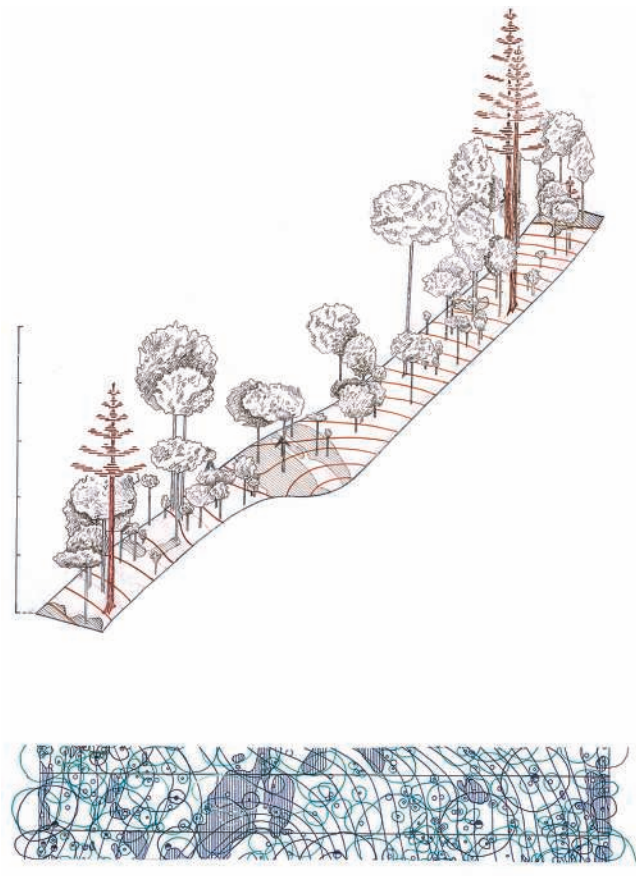
Slika 4. Uzdužni profil E – F  
Figure 4 Longitudinal profile E – F



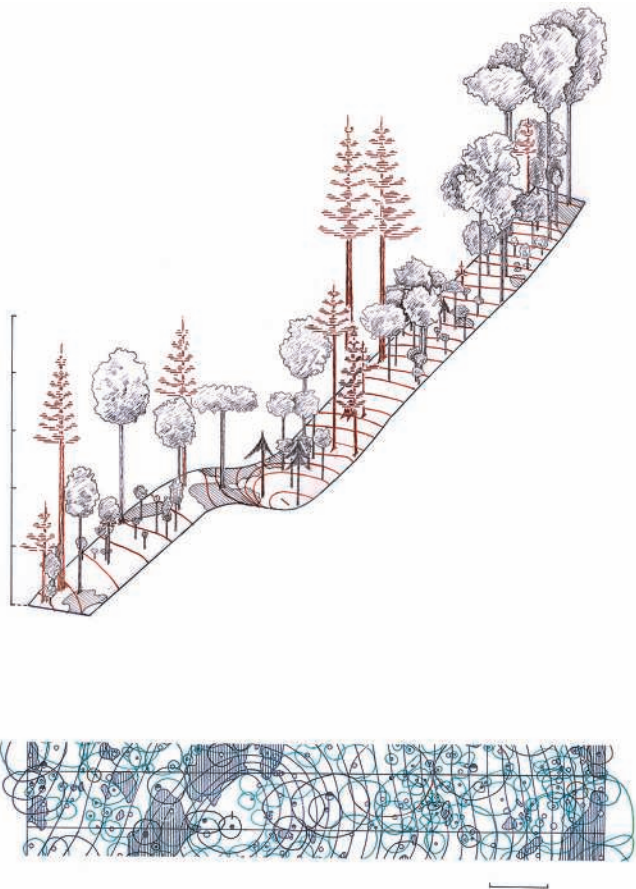
Slika 5. Uzdužni profil G – H  
Figure 5 Longitudinal profile G – H



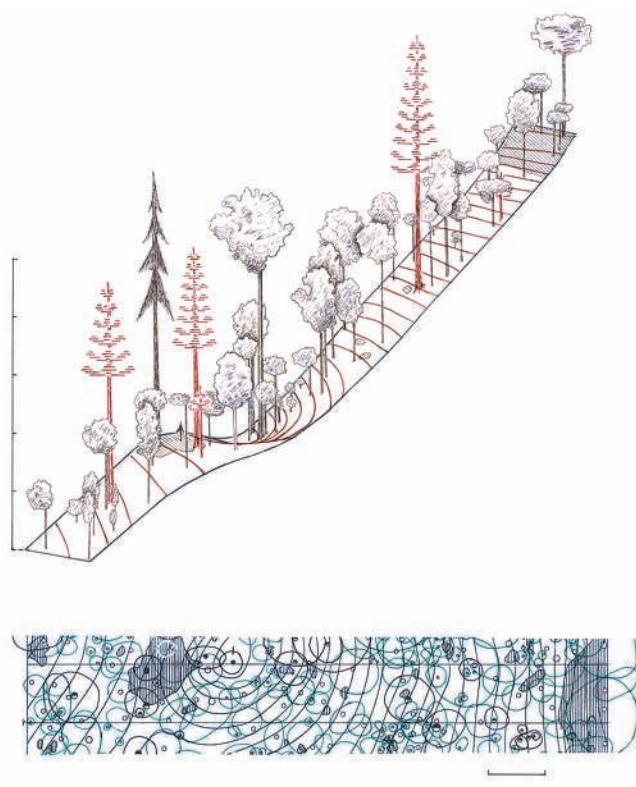
Slika 6. Uzdužni profil I – J  
Figure 6 Longitudinal profile I – J



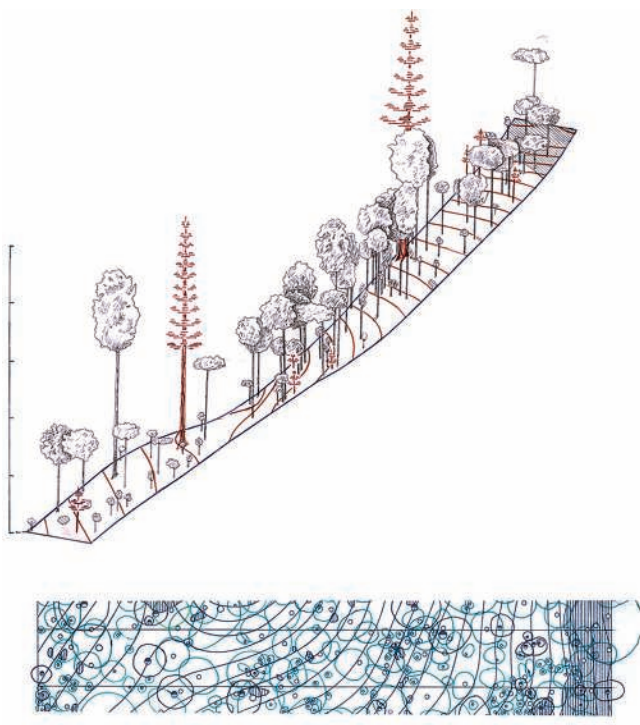
Slika 7. Uzdužni profil K – L  
Figure 7 Longitudinal profile K – L



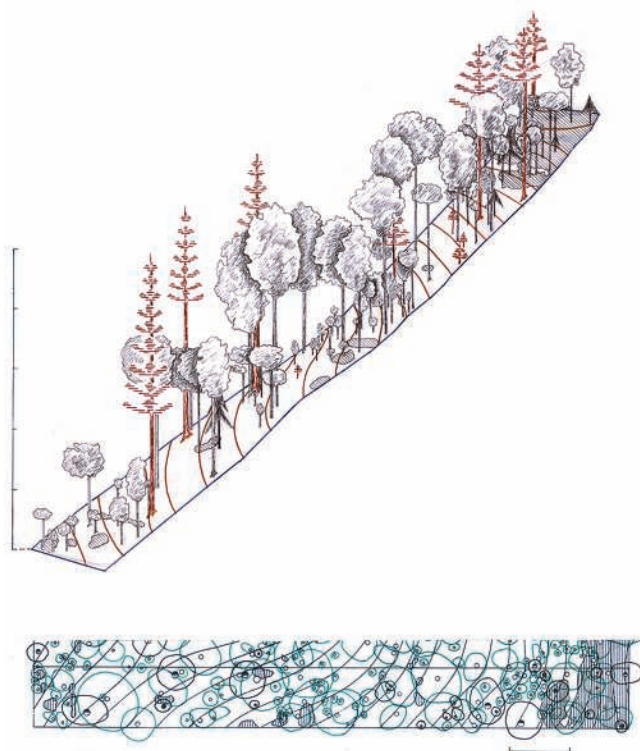
Slika 8. Uzdužni profil M – N  
Figure 8 Longitudinal profile M – N



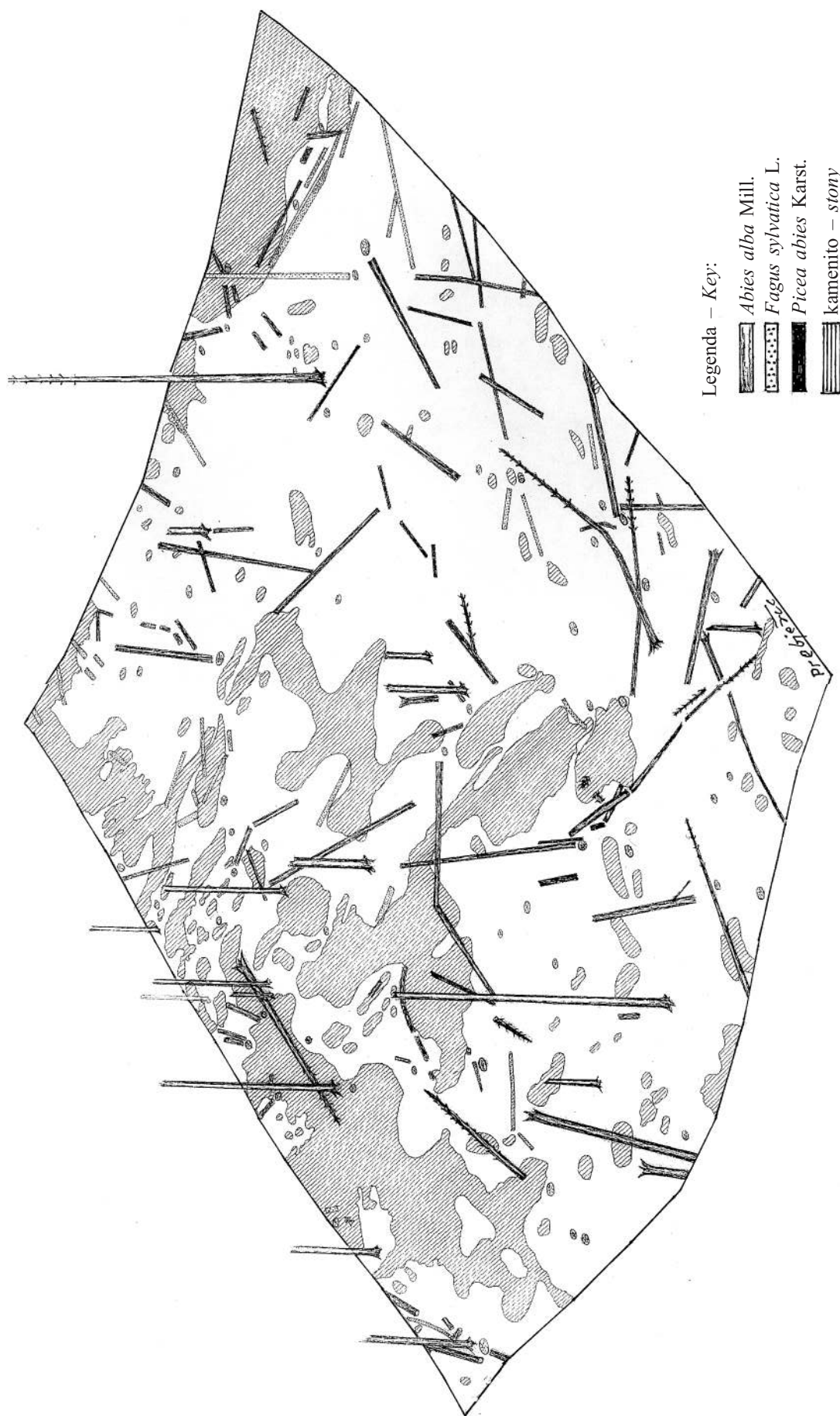
Slika 9. Uzdužni profil O – P  
Figure 9 Longitudinal profile O – P



Slika 10. Uzdužni profil R – S  
Figure 10 Longitudinal profile R – S



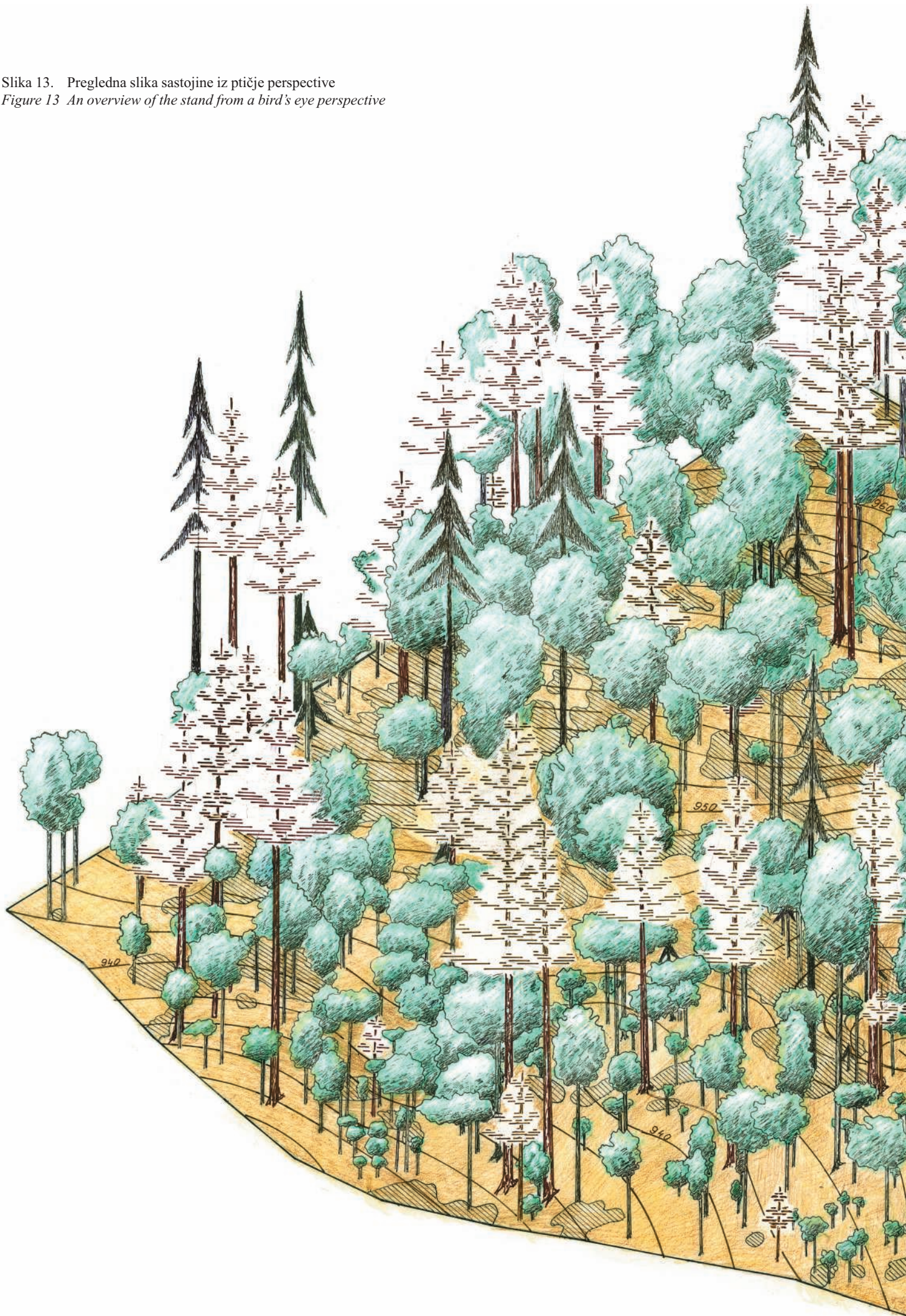
Slika 11. Uzdužni profil T – U  
Figure 11 Longitudinal profile T – U



Slika 12. Projekcija odumrlih stabala na pokusnoj plohi u sastojini prašume bukve i jele "Čorkova Uvala"  
 Figure 12 Projection of dead trees in a sample plot in the beech and fir virgin forest of "Čorkova Uvala"




Slika 13. Pregledna slika sastojine iz ptičje perspective  
Figure 13 An overview of the stand from a bird's eye perspective










Legenda – Key:

 slojnice – contour lines

 kamenito – stony

 *Abies alba* Mill.

 *Fagus sylvatica* L.

 *Picea abies* Karst.

*A sample plot was established by Academician Milan Anić, PhD, in a beech and fir stand (Abieti-Fagetum illyricum, Horv. 38) in “Čorkova Uvala” virgin forest in 1957. This is the oldest sample site in Croatia, which allows successive monitoring of the structure and dynamics of virgin forest development. Figure 12 shows a projection of standing and lying dead trees.*

*The 1 ha sample plot was established in the shape of a square with sides of 100 m in length. The plot is divided into one hundred 10 m x 10 m squares drawn into the map. These squares serve as the basic unit for monitoring details in the sample plot, such as terrain stoniness, tree arrangement, contour lines at one meter height difference, naturally selected trees, and others. In the process of measuring breast diameters and heights, each tree was numbered. The crown shape was defined with four mutually vertical radii, while the eccentricity direction was marked separately.*

*The recorded data were subsequently processed using standard methods. The results were presented in tabular and graphic form. The picture of the stand was graphically presented with a horizontal projection and the profile (Anić, M., 1965, Prpić, B., 1979).*

*In order to obtain a realistic picture of the stand that would visually resemble its original appearance, the stand in this paper was presented from a bird's eye perspective, from the above and slightly to the right. The third dimension was also introduced. Tree arrangement, the relationship among the crowns, crown layers – all these elements are much more realistic if presented in this type of perspective. Tree heights were retained in the same scale in order to allow for comparisons and reading of concrete heights.*

*In this work, the subject stand was shown with ten profiles using the technique mentioned above. The surface area of each profile is 10 m x 100 m. The position of the profiles in the sample plot is given in Figure 1. Each profile is accompanied with its respective horizontal projection, Figures 2 – 11. Projection of dead trees in a sample plot in the beech and fir virgin forest of “Čorkova Uvala”, Figure 12.*

*The integrated profiles resulted in a clear picture from a bird's eye perspective of the whole stand situated in the sample plot in “Čorkova Uvala” virgin forest, Figure 13.*

*The individual profiles and the total picture are in fact graphs of the stand in the sample plot with precisely defined coordinates and dimensions of even the smallest tree. There were 769 big and small trees in all.*

*The presentation of structural relations among the trees in the sample plot in “Čorkova Uvala” virgin forest is from 1957. The present condition will be obtained from this year's measurements, which will be performed thanks to continuous research activities by the Department of Forest Ecology and Silviculture of the Faculty of Forestry, University of Zagreb.*