



My little piece of Land

Farmers from Croatia
talk about their life
and how they work in
harmony with nature



Marija Martinko
Johannes Maurer
Wolfgang Suske

S fotografijama
Marka Vrdoljaka

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Deutscher Verband für Landschaftspflege
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Marija Martinko, Johannes Maurer, Wolfgang Suske, Elisabeth Scholz; suske consulting; www.suske.at
dr.sc. Igor Boršič, mr.sc. Vlatka Dumbović Mazal, Aljoša Dupličić, dr.sc. Matija Franković, Ivana Ilijaš, Ivana Plavac,
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DI Wolfgang Suske



Bozo loves his horses in the Karst region. Marica's little but big world are her fields. Ivica has his bees, which never speed up his way of working. All of them are farmers. I was fascinated by how everyone of our farmers from so many different regions of Croatia described how they try, day by day, to live with the rhythm of nature.

A big thanks to Marija Martinko, who did all the interviews for these stories and to Marco Vrdoljak, who made the photos. And an especially big thank to all the farmers, who offered us very lively and personal views of their lives and their thoughts. In all stories we find happy moments as well as serious aspects, open questions and great experiences. We had a lot of respect and joy in collecting all the farmers' messages and in preparing this book for you.

Now it is finally your turn to enjoy it!

Wolfgang Suske

Dr.sc. Matija Franković



Croatia is one of the richest European countries in terms of biodiversity. This is due to its geographic position at the crossroads of several different biogeographic regions. Vast plains and wetlands along the rivers of Sava, Drava and Dunav are located to the North. The central part is characterised by mountains and large areas of forest complexes. The unique indented coastline of the Adriatic harbours more than a thousand islands, islets and rocks. This great diversity of habitats is the origin of its biodiversity richness. Most of the today's habitats are semi-natural, created by the centuries of subtle interaction between man and nature. This book delivers 14 warm stories from across the whole of Croatia and gives an interesting view on how the coexistence of the men and nature is still alive today.

Matija Franković



I know the soul of every single vine

Ante Ivčević

Ante Ivčević, whose nickname is Cobo, is a winemaker on the island of Vis. He is sure that he could not do anything else – he would miss the open space, the nature and his freedom. As he says, islanders like to be their own bosses.

Cobo cultivates the old, almost forgotten vine variety Palagružonka. He brought it from the island Palagruža and grafted it in his vineyard to save it from extinction. This variety is characterised by resistance to drought and a specific aroma that reminds him of tangerines. He will soon become the only winemaker in the world to produce superior quality bottled wine from Palagružonka.



Cobo – that’s my nickname. My friends called me that so now everyone knows me under this name and that is how I named my trade. I have about 2 ha of vineyards. Half is plavac, half vugava. And now I have this new third of a hectare, where I cultivate palagružonka and cipidrag. Beside vineyards, I also have around 300 olive trees, so it is one complete farm. My vineyard is on five locations. That’s how it is on the islands; parcels are small. Both my grandfather and my father were winemakers and I got most of my knowledge from them. I have a feeling both of them are still present in this konoba. This table, these shelves, all this hasn’t changed for the last 50 years. When we sat around this table, we only talked about wine and vineyards. That’s why I know all those old varieties of vine and can recognize them by their leaves. They instilled that into me. Now I want to pass on that knowledge to my children, to my sons. It is one tradition.

Islanders like to be their own bosses

I’m used to winemaking. I’m not sure if I could do anything else after so many years here. I would have a hard time getting used to an office job. I’d miss the open space. Even when I drive a car, I look at the nature around me. That is what I like most about this job, that I can be in nature and have time to be with my family, with my kids, and I have my freedom, of course. On the islands, people like to be free and to have their lifestyle. Islanders like to be their own bosses. And they like to, how can I say, philosophise.

They know everything. It simply isn’t possible that they don’t know something. That’s their character, what can you do! They can’t stand being told what to do, they love working for themselves. That freedom gives them energy to work non-stop during the summer season. It’s an island mentality. Those people who are not from here rarely adjust to the island. They can’t stand it when it’s raining or the Jugo is blowing for a whole month. I can sit in a cafeteria for two days in a row, it’s not a problem but they can’t. I can also work continuously for ten days, even on some stupid job, I can take an axe and collect wood but they can’t.

How Palagružonka managed to survive

Palagružonka is an indigenous vine variety from which only one vine is left on the island of Palagruža. Benedictines used to have a monastery and a vineyard on a hillside there, which collapsed over time. A pile of soil rolled onto this last vine, but it was still able to live that way for years. It survived because it grew ten pruning arms on the other side of this pile of soil. I grafted them and when I tasted the fruits that it gave, I was amazed with its special aroma!

The taste of the grapes reminded me of tangerines. I contacted the Institute for Adriatic Crops and Karst Reclamation in Split as well as the Faculty of Agriculture in Zagreb. The latter are still studying this variety but they haven’t found it anywhere else yet. In the meantime, I continued



*"I never look on the negative side,
always 'it'll be good, it'll be good'.
My father taught me that."*

to graft the vines so now, at this moment, I am the only one who has a palagružonka vineyard and will soon have bottles of wine with palagružonka name on it! Generally vines can only be cultivated in those areas that have between 400 and 800 litres of annual rain. Island Palagruža has 200 litres of precipitation a year. This means that this vine has managed to survive on just 200 litres!

In my vineyard I feel the best

My favourite place is in my vineyard. I feel great there. Maybe it's stupid to say, but I feel powerful. I'm aware that I know how to do this job, it's a pleasure to do it and I know that working here means everything to me. There's always one part of the vineyard which you prefer more. For me it's this part where plavac grows. It always bears a lot of fruit, it's always healthy and gives great wine. I grafted all of it and that's a different experience from when you just plant something. By grafting you are transforming a wild vine into a domestic vine – you give her life, that's the thing! After some time, you see and know the soul of every single vine. You pass by each one, touch each one as you take care of it, clean it and cut it. Really, after 20-30 years you know what each one of them is like. It's hard to describe in words.

Fire threatens the overgrown land

Many things have changed in the last 20-30 years. Before, people didn't used to panic so

much when there was a fire because the land was cultivated. Some small parts would burn down but the fire rarely spread further because of the vineyards and the paths. Nowadays everyone is in a panic when a fire occurs because the forest has spread right up to the houses. If it weren't for fire fighting aircrafts, the whole island would have already burned down. In the 1980s, around 700 ha of arable land was interspersed with vineyards, but today this has been reduced to about 250 ha. The forest is no longer being cut because people stopped using wood for heating. Terraces are no longer visible because vineyards are overgrown with shrub. Most of the vineyards are now close to the road, those that are further away, on the hills, are overgrown.

It's a process which is difficult to stop. I try to keep talking about wine to encourage people to start producing it again, to start cultivating indigenous vine varieties and superior quality wines which can be produced here. They offer, in my opinion, the biggest potential for the development of Vis.

When I started with palagružonka, half the locals laughed at me and made jokes, but I didn't mind. I'm an optimist. I don't have time for depression, I'm always active. And I never look on the negative side, always "it'll be good, it'll be good". My father taught me that. He would always tell me "a beautiful face changes into a frown on those who complain all the time".





The extensive pastures on Vis are foraging grounds for Eleonora's Falcon (*Falco eleonora*) which is very rare in Croatia.



On the preserved beaches of Vis the beautiful Sea Daffodil (*Panacratium maritimum*) can be seen.



Since the demise of traditional pasturing, the Early Spider Orchid (*Ophrys sphegodes*) has begun to disappear.

A man-made world of stonewalls and flowering meadows

The Island of Vis is Croatia's farthest inhabited island, situated 45-55 kilometres from the main coast. The entire island (all 90,26 square kilometres) is in the Natura 2000 SCI site 'Otok Vis'. Agriculture, especially viticulture, has always been a very important part of island's life and economy. Although there is an abundance of fertile soil, the karst fields located in the south-east part of the island were not in themselves enough to support the island's once thriving agriculture. As a result, the slopes surrounding the calcareous hills were turned into terraces. This required a huge effort on the part of the local farmers who had to collect thousands of stones in order to build the many stonewalls that hold up the terraces to this day. Such an impressive man-made landscape has also provided a suitable habitat for a huge number of plant, insect, small mammal and reptile species such as the Four-lined Snake (*Elaphe quatuorlineata*). Unfortunately, most of the terraces have since been abandoned and numerous vineyard and olive grows are becoming overgrown with macchia.

Orchids will not grow in macchia

One of the island Vis's other characteristic habitats are the Mediterranean grasslands (priority habitat 'Pseudo-steppe with grasses and annuals of the *Thero-Brachypodietea*') which are at their most colourful just before the first summer droughts. They are well known for their beauty

and species richness. They harbour many rare orchids such as the threatened Bee orchid (*Ophrys apifera*), the vulnerable Bertoloni's Bee Orchid (*Ophrys bertolonii*), Early Spider Orchid (*Ophrys sphegodes*) and Four spotted Orchid (*Orchis quadripunctata*). These grasslands were maintained by pasturing but since the demise of such traditional agricultural practices and the reduction in number of cattle, they have begun to disappear under a thick layer of invading macchia.

The island also hosts a number of Mediterranean temporary ponds, which are crucial for certain communities of plant, invertebrate, amphibian and bird species. Current changes in climate, particularly as regards the amount of rainfall and frequency of intense droughts, make them increasingly vulnerable and dependent on active management such as traditional grazing. This can prevent them becoming overgrown with scrub. Also traditional low-scale farming won't pollute the area with pesticides and fertilizers.

The Natura 2000 site where Ante Ivčević works...

- has been formed by farmers through the centuries
- needs grazing cattle to preserve the colourful grassland
- is the base for tourism which is the main market for the island's agricultural products



No matter what happens – I will never leave this place

Mijo Jaredić

Mijo Jaredić grew up on the Sava river. Before he learnt to walk, he learnt to swim. Today he has a herd of 13 podolian cattle that are grazing beside the Sava on the pasture called Gajna. During the winter, when the Sava overflows, they move to Bajer, a higher part of the pasture and then Mijo brings them food by boat or tractor.

He loves to come to his field and see that his corn and wheat are tidy and growing well. But not everything is in order – many people have left Gajna. His biggest wish is that more people join him to graze their cattle on the pasture. With ten people it is possible to bless Gajna. And then the village would live once more.



Cattle and people have survived here for ages because of Gajna, our pasture. Gajna gave a lot to this village. A lot. When I was a young boy, every house in Poljanici had at least one cow. I remember, there were altogether around 100-150 cows and 60-70 pigs. Two rows of cows and one row of pigs would wonder through the whole village – along with geese, horses, and everything else that was heading to Gajna. The number of cattle you had would determine how many days you watched over all of them. We as children always helped because there was no fence back then. We stayed there until noon and then, because the cows were resting at that time, we went home for lunch. Later we returned, sat and waited until they came to us.

This is also where I learned to swim. We didn't even know how to walk properly before we learnt to swim. We grew up on this Sava. In the summer we swam, fished and played football. We organised championships, village against village, only then we didn't have showers. Instead we ran directly into the Sava. During the winter everything was frozen so we could put up goal posts – and there you have it – hockey on ice. And that was how we would spend our lives. All revolved around the cattle. When the sun was setting behind the embankment surrounding Gajna, we let the cows go back home. Each went to its owners yard, they didn't need to be told the way. This is how I grew up on Gajna and why I came to love it so much.

We need a law for common pastures

After the war little by little everything was renovated but the number of cattle continued to decrease and the Gajna started overgrowing. Then, one day, Dr. Beneš from Brod Ecological Society began a project to save the pasture, which I was really impatient to join. We founded a Veterans Association Eko – Gajna to encourage people to take their cattle back onto Gajna. We also bought more podolian cattle on behalf of the Association's members. The idea was that people would be able to make some money from the cattle while, at the same time, keep the pasture and its rich biodiversity alive. Also, these wetlands protect the rest of Croatia from floods so the action would benefit everyone, even those further afield. We really expected it to work but, up to now, the State has not found a way to regulate common pasture land even though agricultural communities have been in existence already since the 19th century. In the past everything was clearly defined and you knew exactly what kind of rights you had. There is simply no other way because, when the Sava overflows, all the cattle move to the parts of the pasture that are still dry. You can't define borders under these circumstances as they are constantly changing.

Small farms are also productive

Each year we have 3-4 bulls and calves, and around 10 pigs for sale. Here, behind the house, we have an 8 Ha field so we have everything for



"We didn't even know how to walk properly yet before we learnt to swim. We grew up on this Sava."

our needs. I'm an organic farmer even though I don't have papers for that because that got stuck in the administration as well. We have a plum and apple orchard, I grafted all these old varieties. We also have vegetables, cheese, kajmak – a kind of cream –, as well as ham, the traditional sausage kulin and rakija. Someone would say "you didn't sell anything", but wait a minute! I take care of all five members of my family who never go hungry and I was able to ensure that my three daughters graduated. What I want to say is that small farms are productive! But the laws are getting more and more rigid and I'm afraid that we won't be able to handle these changes financially in the future. I'm afraid that small producers will disappear and then we will see what a mistake that was, but you can't buy back lost time and knowledge. In my opinion, production from small farms has to be connected to the market. That chain is currently broken. Yet, all that is needed is an agricultural cooperative or something where I could offer what I produce. I think that we should use the potential to produce our own food and offer it to the market, not to rely so much on imports.

This is my region, this is mine

No matter what will happen, I won't leave this place. Even if I'm left with only a hoe, I will keep producing my food and keep my customs, make rakija, and have weddings and fairs as long as I'm alive. I keep fighting all this time so that we can do as much as we can for this village and I

still hope that things will move in a good direction. I love to come to the village and see that the church is ok, that the centre is ok, that the promenade is ok. I love to come to my field and see that my corn and wheat are tidy and are well grown. That's it. I did something. This is my region, this is mine.

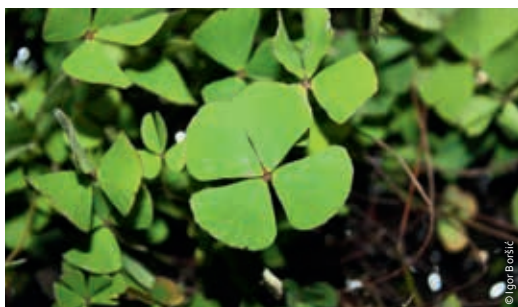
10 people can bless this Gajna

My favourite is to come up to the embankment and see the cattle how nicely they are spread and how they graze, oh, what a sight! I stay here for half an hour sometimes. I observe this stillness and nature and I relax somehow. I feel some kind of relief, peace, spiritual pleasure, as they say. My youth and everything else comes to my mind during this time, and sometimes melancholy and sadness take over when I think that all this will disappear. What I would love the most is for 10 of us from the village to come to Gajna with all our cattle and let them graze there. With 10 people I know that I would be able to bless this Gajna. All of us would take our tractors, oh we would clean that up in no time! This is what would make me happy: to see that everyone in the village is here, that they can produce and benefit from this wonderful area. That keeps the village alive.





The Gajna pasture is one of the few remaining nesting areas in Croatia for the Little Egret (*Egretta garzetta*).



Periodic flooding of the pasture ensures the right conditions for the endangered Upright Water Clover (*Marsilea quadrifolia*).



The Black Stork (*Ciconia nigra*) can often be seen foraging on the Gajna pasture.

Pastures for man and nature

The Natura 2000 SCI site 'Gajna' is a wetland pasture situated along the Sava River, east of the town of Slavonski Brod. This semi-natural landscape contains one of the last wetland pastures that were once common along the banks of the river Sava. They were traditionally used for cattle grazing by farmers from the surrounding villages. Apart from its significant cultural heritage value, Gajna also has a great biodiversity value.

Periodic flooding and drying of the pasture provides the right ecological conditions for numerous valuable habitat types and species. One of the most significant plant species here is the endangered Upright water clover (*Marsilea quadrifolia*) which is found only in a few places in Croatia. Every time the Sava floods, alluvial depressions in the pasture retain water for a longer period of time which allows the water clover and other plant species to thrive. Large areas of shallow water are also essential for breeding fish species like the Crucian carp (*Carassius carassius*).

Invasive plants endanger the grasslands

Such peaceful areas, with their abundance of fish fry, insects and amphibians, attract a large number of bird species which is why Gajna is an important part of a much bigger Natura 2000 SPA site 'Jelas'. Numerous bird species can often be seen foraging on the Gajna pasture such as the impressive and strictly protected Black

Stork (*Ciconia nigra*) or the Little Egret (Egretta garzetta), for which this SPA site hosts one of the few remaining nesting areas in Croatia. The combination of traditional farmland, open grasslands and riverbanks is also perfect for many other bird species such as the Northern Lapwing (*Vanellus vanellus*) and the White Wagtail (*Motacilla alba*). The latter is a frequent visitor to Gajna. This harmonious coexistence of people and nature is based on farmers' knowledge of how to live with, rather than fight against, the river and its dynamics. Unfortunately, the number of cattle pasturing on Gajna today is in a strong decline. The absence of sufficient grazing means Gajna is becoming overgrown and losing its biodiversity value. This is further exacerbated by the spread of an invasive plant species, the False Indigo (*Amorpha fruticosa*).

The Natura 2000 site where Mijo Jaredić works...

- is affected by regularly flooded pastures
- is an example of harmonious coexistence of people and nature
- will lose its biodiversity without pasturing and because of the spread of invasive plants



The cleanest job is to work with soil

Marica Jakoliš

After 36 years of working in an office, Marica Jakoliš decided to return to Ravni kotari – to the land where she grew up. She grows fruit and vegetables in the way that her parents once taught her.

Every Saturday she sells her products at the market. Often she is late - but when she arrives, her customers are waiting for her. They stand at the entrance to the market, grab the crates from her car and carry them to her stall. She is happy because she can provide them with something that they value. Marica's favourite place is an olive grove because she only sees the horizon from there. She loves to sit down when it gets dark and look over the results of her day's work.



When I was a little girl, my mother used to take me with her to the vineyard. She was so wise! She would dig and say „Who will do more? Will I dig more rows or will you read more pages?“ She was actually encouraging me to study, but also to watch what she was doing. In the end, I learned twice as much. Of course, in the years of puberty we all wanted to escape so I moved to Šibenik to attend high school and remained working there afterwards. After 36 years, my office started to suffocate me and I felt that it was time to leave the town and return to where I began, to where I was born.

Producing for the health of many people

I started 5 years ago with 1.2 ha. It was a vineyard that my grandpa had once planted. There wasn't much left, so I renovated it but only with old varieties of vine: maraština, babiĆ and plavina; the same that used to grow here. Our ancestors laid the foundations for us and I felt that nothing needed changing I just needed to build on their wisdom. I looked for where olive trees used to grow and planted them there. I did the same with the almond trees.

In those days, they didn't have internet, phone or television. Instead, they lived in harmony with nature and learned from it. I followed that way of life and, after the third year, the olive trees are almost lying on the ground from the weight of their fruit. In the beginning, we produced only for the family. But, when my son in law got

involved, we came to the idea that it should no longer be just a hobby; as well as producing small quantities for the family we could also try and produce as much as the land was willing to give us. In that way, we could preserve this valuable area for future generations, as well as offer a healthy produce to as many people as possible. Every year we enlarged our farm a bit and now we have on 13 Ha in total, out of which we work on 8 Ha. We are registered as an 'ecological family farm'. We grow grapes, figs, plums and olives. As for the vegetables, if I would count them all, we would probably have over 90 varieties! We sell our fruit and vegetables from our doorstep and on the markets in Zadar, Split and Zagreb. We also have home delivery for those people who are not able to reach the market.

“When will you come again?”

I'm always late to the market. And when I arrive, my customers are waiting for me! They stand at the entrance, grab the crates from my car and carry them to the stall. That makes everything go much faster. I then give them bags so they can choose whatever they want. When they stand in line to pay, bag in hand, they always ask: “When will you come again? Will you be here on Saturday for sure?” so that they know if they should buy for one or two weeks. I am so thrilled with their enthusiasm! Sometimes I don't have time to wash the soil off the carrots but they still say “it doesn't matter, just keep bringing us more!”. One lady once told me “Ms. Marica, we will keep



"We will, Ms. Marica, keep buying from you. I pray God gives you good health to live long so that you can keep bringing us this lovely produce for as long as possible!"

buying from you. I pray God gives you health to live long so that you can bring us this lovely produce for as long as possible!". I was deeply touched by that. It means that I am bringing them something they value.

My account is great

I work literally from early morning till late in the evening because vegetables require a lot of work. But when I do something, I do it from my heart and I'm sure I will succeed. And I was sure that I would at the least be able to produce enough food for my family. For me, that is the biggest wealth of all! To know what kind of food I have at home, what I serve on my table, not the status of my bank account. My account is great: olives and vineyards have borne fruit, there are plenty of vegetables, potatoes, onions, garlic, chickpea, rye bread – what else do I need? And I'll be able to sell the surplus of what I've harvested to pay the utility costs, buy some gas and so on. I don't do this to gain any wealth, although it is possible to live nicely from it. It is wealth itself. For no amount of money in the world would I sell it to you when I know that I can live from it.

I live in the area full of karst but it is, all the same, very fertile. Not one of my ancestors ever grew hungry because they had fertile land and knew how to work it. There is so much mechanization today, which is a thousand times easier, but not remotely as much is achieved. That's because

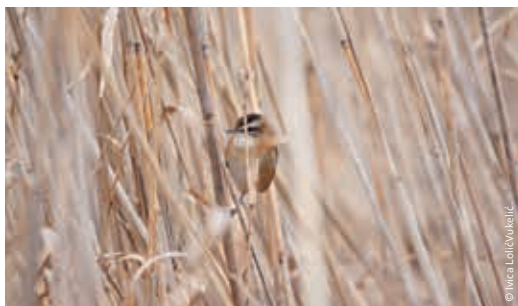
it's disgraceful to work on the field, yet I believe the cleanest job is to work with soil.

Nothing limits me in my olive grove

My favourite place is this olive grove because I only see the horizon from here. Nothing limits me here. I see the sun and the clouds, the valleys and the hills, and the fruits of my labour. I don't miss my armchair, television or computer. I don't miss anything when I see the beautiful sunflowers and these olive trees. I love to sit down when it gets dark and look around at what I have achieved that day, that it possible here. I have many beautiful memories from this place.

I remember when my parents worked here and we, as children, prepared lunch for them at home and brought it out here. All of us would then sit down and eat from that single pot. Those memories bring back my whole childhood now. I wasn't able to contribute a lot back then, so now I'm happy that I can work the same way as they did. As a child I wanted to escape to the city because what they did seemed impossible to me. I thought I was not able to do that. And now I finally see how beautiful it is. And I don't have any other wishes except that God supports me to do this as long as possible. I don't need anything. I have everything.





The usually monogamous Moustached Warbler (*Acrocephalus melanopogon*) builds its nest over water.



The wild population of Hermann's tortoise (*Testudo hermanni*) is critically endangered.



Stonewalls, which surround olive groves and vineyards, are a perfect habitat for the Leopard Snake (*Zamenis situla*).

Biodiversity made by Agriculture

The Natura 2000 site 'Ravni kotari' is a lowland area in northern Dalmatia, situated southeast of the town of Zadar. A distinct geographical region in its own right, Ravni kotari is best known for its once well developed traditional agriculture. Spacious valleys of fertile land alternating with karst ridges are influenced by both the Continental climate from inland and the Mediterranean climate from the Adriatic coast. Together, they create the right conditions for cultivating fruit and vegetables and for cattle breeding.

Set on the Dinaric karst, this landscape is rich in traditional agriculture-related architectural elements such as stonewalls, which once surrounded olive groves, orchards, vineyards and other patches of arable land. They are a perfect habitat for a large number of insects, small mammals and reptiles such as the Leopard Snake (*Zamenis situla*), Four-lined Snake (*Elaphe quatuorlineata*) and Hermann's tortoise (*Testudo hermanni*). Other elements of this mosaic landscape include patches of pastureland, macchia, scrubs and forests made up of Pubescent Oak and Oriental Hornbeam. The site's dry calcareous grasslands with Juniper bushes are also an important habitat, home to a very rare endemic species of butterfly, the Dalmatian ringlet (*Protoerebia afra dalmata*) whose main centre of distribution is situated here.

The last breeding site

The endangered European Roller (*Coracias garrulus*), one of the most beautiful birds of

Croatia, has its only registered breeding site in Ravni kotari. It requires an open sunny countryside interspersed with a mosaic of agricultural land and White Poplar (*Populus alba*) trees along the field boundaries. This is where it commonly nests. From these vantage points it can observe the surrounding cultivated fields and find food easily, mainly larger insects.

Such a traditional landscape bursting with ago-biodiversity is of a great importance for the conservation of European Roller, which has become endangered through the loss of nesting habitats and intensive monoculture agriculture. The latter's use of pesticides reduces food availability and causes poisoning. The same aspects of land use threaten other bird species that are dependent on agriculture. Abandonment of traditional low scale farming and extensive pasturing represents a major threat to these species as well as to the loss of traditional knowledge and cultural heritage.

The Natura 2000 site where Marica Jakoliš works...

- is habitat for the critically endangered European Roller which requires open countryside with a mosaic of agricultural land
- is rich with traditional agriculture and agriculture related architectural elements
- is habitat for many synanthropic species



I take really good care of my bees

Ivica Dragan Elez

When the Bura is blowing, the beekeeper Ivica Dragan can't stand still. Just like his bees, Ivica is always full of energy even though he is continually working. The Bura, he says, inspires him to move and jump, especially when he is in his favourite place, Lake Peruča.

Ivica enjoys observing the reaction of people when they taste his honey for the first time. They are always surprised at its high quality and keen to buy some to take home with them. The special taste comes from the fact that he frequently moves his bee-hives around to the cleanest areas of untouched nature in Dalmacija, Dalmatinska zagora and Lika.



A bee colony is, in itself, perfect. Bees may seem insensitive to us but that all changes as soon as one gets to know their character and the ideals of their community. A bee colony looks for what is best for the whole community. If someone attacks them, they are immediately ready to sacrifice their own lives in order to protect the rest of the colony. They are hard working, there is no laziness. Each one, depending on its age, does its share of the work. A young bee feeds the larvae and the queen. As it gets older, it becomes a guard bee, then a foraging bee and in the end, when it is old, a water carrier, but it keeps working for as long as it's alive.

A waiting list for honey

My farm is called OPG Ivica Dragan Elez and consists of two members of my family - my mother and myself - but we have many helpers. We are engaged in organic beekeeping which produces honey, propolis, comb and comb in honey. We also grow vegetables and, more recently, fruit. In addition, we cultivate an indigenous variety of garlic from Ljubitovica, also called 'šarac'. It became popular in Croatia after a group of Italian scientists discovered that the Ljubitovica garlic contained the highest quantity of health benefiting properties of all the garlics they had tested. I've also decided on old varieties for my orchard, such as the indigenous yellow plum because they are more resistant to climatic conditions and pests, and their fruits are more aromatic and long lasting.

Almost all of my customers who buy honey also want to buy my garlic because they are familiar with the way I produce it. Most decide to buy after they have tasted a product and I like that. I really enjoy seeing their reaction. Many people confirmed that my honey has a special energy and that makes me really happy. Last year there was a waiting list for my Dalmatian floral honey, which I usually produce in smaller quantities. Customers who bought one year reserve for the next year, so this honey gets sold out before it is even produced! The honey is a mixture of sage, Jerusalem thorn and a variety of grassland plants. I also have chestnut honey, which received an award for quality, and black locust honey from Vrlika region, which is more aromatic than the continental one. Altogether, I extracted one tonne of honey this year; that's as much as I have ever produced!

I'll never speed up my way of working

I have 118 hives that are currently placed in two separate locations: one near Bruvno in Lika and the other near Vrlika in Dalmatinska zagora. During the course of the year I move them around, sometimes to the hinterlands of Biokovo, or to a location near Ozalj or to the islands of Vis and Šolta. It is very important to continuously listen to nature and to the other beekeepers in order to know where the best conditions are, for instance where it has rained recently. I also follow the weather forecast several times a day. Out of all of the locations Vrlika is my favourite. It is a perfect combination of Continental



"I'm happy that I have the freedom to decide about my own life, do what I've always loved to do since I was a child and spend a lot of time in nature."

and Dalmatian climate. I've always loved places by the water because I associate them with a sense of abundance and blessing. Maybe because where there's water, there's life. Most of all, I love to come here on lake Peruča, especially after working with bees during the summer. It's close to my hives so I come here to have a swim and freshen up before travelling back home to Kaštela. When there is the Bura, like today, it really inspires me to move, run and jump!

Regarding my work, my favourite part is being with the bees. I take really good care of them. They are growing in number but I'll never speed up my way of working. I don't want them to turn into some impersonal money-making machine. It's very important for me to do everything with quality, cleanness and as best as I can. It takes a lot of time but I don't want to give up on that.

Children are always thrilled when they see a queen bee

My ambition is to encourage other people to take up organic beekeeping. So far, besides being a lecturer in beekeeping, I've also worked a lot with children. I've brought them to my hives and taught them about the life of bees. Each one puts on a protective suit, then we open up and examine the hives together. They were thrilled when they saw a bee-queen because, even though there is only one in the whole hive, they always manage to find her.

I'm happy that I have the freedom to decide about my own life, produce healthy food for myself, do what I've loved since childhood, spend a lot of time in nature and organise my time as I like. I have a chance to monitor nature through beekeeping and I have to say I have never seen so many changes as I do now. Beekeepers notice many things! It may look as if there are a lot of flowers and that the plants are producing seeds as before. Everything looks normal but there is no nectar. That's probably because the summers are getting drier and the temperature is increasing.

The Mediterranean climate offers a product full of aroma

I support the protection of endangered species but I also think that we need to protect small producers. Those in the first line of government should be supporting a return to sustainable agriculture and the marketing of products through agricultural cooperatives that can guarantee the products are traditional. One of the main characteristics of this region is that there are many small land parcels which are harder to cultivate, leading to a lower productivity. But thanks to the Mediterranean climate and the long hours of sunshine we end up with a quality product full of aroma. This holds tremendous potential and a chance for progress, through for instance the creation of a wealth of indigenous home grown brands. Food is the most important and we can only produce it well if we are in harmony with nature.

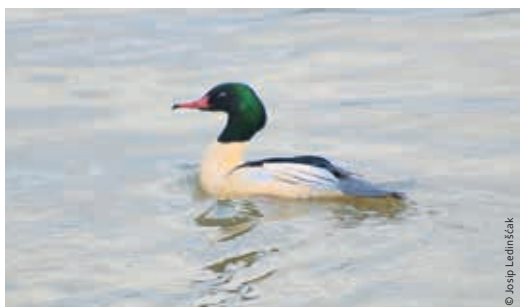




The Dalmatian Spined Loach (*Cobitis dalmatina*) is an endemic fish species of river Cetina.



The garden flower Dalmatian Rockbell (*Edraianthus dalmaticus*) has its original distribution area in the Dalmatian Mountains.



The Cetina area is the only breeding place for the critically endangered Common Merganser (*Mergus merganser*) in Croatia.

Life-giving river

The Natura 2000 SCI site 'Izvorišni dio Cetine s Paškim i Vrličkim poljem' is located in the southern inland region of Croatia, below the slopes of mountain Dinara. It harbours the source and upper part of the river Cetina as well as two surrounding karst fields: Paško polje and Vrličko polje. Being the most water abundant river in Dalmatia, Cetina has transformed this karst area into a lush green region, which was once well known for its traditional farming and cattle breeding.

The site hosts a very special type of humid grassland that is only found alongside karstic rivers such as the Cetina. These sub-Mediterranean grasslands of the *Molinio-Hordeion secalini* owe their uniqueness to the extreme differences in soil moisture between summer and winter seasons, which allows plant species of both dry and wet habitats to coexist on the same location. Many interesting plants can be seen in abundance here, such as the endemic Dalmatian Rockbell (*Edraianthus dalmaticus*) and Petter's Succisella (*Succisella petteri*) as well as the endangered Medium Hairgrass (*Deschampsia media*), Meadow Barley (*Hordeum secalinum*) and Amethyst Meadow Squill (*Scilla litardierei*). Because of their unique biodiversity value, this habitat type was added to the EU Habitats Directive at the time of Croatia's accession to the EU.

The freshwater habitats in this site also show some remarkable characteristics. Ukliva Dace (*Telestes ukliva*) is a critically endangered endemic

fish species found only in river Cetina, along with the Dalmatian Spined Loach (*Cobitis dalmatina*).

Sheep must come back

The reedbeds along the riverbanks are an ideal nesting place for the critically endangered Moustached Warbler (*Acrocephalus melanopogon*) but they have a tendency to spread onto the neighbouring wet grasslands, which is why their growth must be controlled. The wet grasslands themselves require active management for their survival and for the survival of all those species that are dependent upon them, especially bats, insects and birds. The best solution would be to restore traditional farming practices, particularly extensive sheep grazing which was once common in this area. This was before the Civil war in the 90's caused many people to leave. Such non-intensive agriculture would ensure the freshwater habitats and species that are sensitive to pollution and changes in water regimes stay healthy and are free of disturbances in this upper part of river Cetina.

The Natura 2000 site where Ivica Dragan Elez works...

- was once well known for its traditional farming and cattle breeding
- has suffered severe rural depopulation since the war
- must be managed in an extensive way to protect the freshwater habitats



I cry and I laugh with my horses

Božo Vukušić

When Božo Vukušić was young, he told everyone: "I'm not continuing with school, I will buy myself a horse!" Today he has 30 horses of the indigenous Croatian breed hrvatski hladnokrvnjak.

He lives on Velebit Mountain with his wife Đurđa and his horses. Božo's family has always moved, and it is in his bones too. In the winter he stays on the coast in Gornja Klada and in summer he moves back to his summer dwellings in the mountains. Since there are no roads in this part of Velebit, Božo always goes by foot, carrying everything he needs on his back.



We are the only ones who live in this part of Velebit. We live in the same way as many generations before us lived. I move, together with my wife Đurđa and my horses. My family has always moved and that is in also my bones. That is the only lifestyle I'm used to. That is how it was done before and it is how people survived here. In the winter, they were on the coast, in Gornja Klada, together with the cattle. In springtime they moved higher up onto Velebit, to their summer dwellings. They worked on their fields, pastured their cattle and collected the harvest. In the autumn, when it started to freeze, they moved back down to the coast. If they hadn't lived this way, they wouldn't have survived here. All these piles of stones were once part of their summer dwellings. Today, only our dwelling on Babrovača is maintained and used from time to time. Not to the same degree as before, but we take good care of it. I grow onions, garlic, a few potatoes, swiss chard... – just a bit, so that the soil is black and everything is as it used to be.

My father remembers this whole area still being mowed 40 years ago. Pastures were maintained through a combination of mowing and pasturing. People had goats, sheep and cows. Those that had more children, also had more cattle because there was someone to watch over that cattle. Every household had a donkey and two or three mules. When someone had to transport their hay, they gathered the mules from the

whole village. The next day the mules were lent to someone else.

The horses get their own weather forecast

The horses are my biggest love! When I finished elementary school, I told everyone "I'm not continuing with school, I will buy myself a horse". Then I went into the army, in '95. Whenever I had a hard time, the only thing I kept thinking about was how I will buy a horse once I get back home. And this is what I did. After that I worked in the villages with the horse and a donkey to earn some money so that I could buy a mare. And that is how little by little I increased my herd. Now I have 30 horses, all of them are of the Croatian indigenous breed hrvatski hladnokrvnjak. In the summer they are pasturing outside. Every two or three days I go looking for them. They have bells so I wander around and walk until I hear the bells and find them. We own a lot of pastures and fields here, and all of our relatives have lent us their land as well. No one else owns cattle or works on the fields anymore so my horses are the only ones to graze here. You see how overgrown it is, but if my horses hadn't grazed it that would be a wood now!

The horses have their own weather forecast. They sense it. When they move to the sea-oriented part of Velebit we know that it will snow soon. They slowly move to lower altitudes until they reach the coastal road and during the winter they are in the stable. That is when they require a lot of work



"The wolf, me and the bear live together. He fights for his and I fight for mine."

but I love it. If I didn't love it, I wouldn't have them. When I bought a horse, the guy told me "you will cry and laugh with him". And it really is so.

Rather be hungry here then leave

Every time I walk down from Zavižan to Klada, I pass through Šarinac. That used to be our major field. We grew, and lived off, its potatoes. All of my ancestors suffered here. But now, no one comes anymore. Just me and my horses. I love it here! As children we used to take our cattle to these fields and watch over them. Now I just sit down, eat if I have something, and relax. Everywhere is nice but this place is my favourite.

My big wish is to have my own goats and sheep again. Then I can produce my own milk, butter and cheese. Also, when mountaineers come, they can see how people used to live in these mountains. I only need a stable on Zavižan, a proper one, so that everything is as God commands. Kids that have never seen a cow or a sheep would come visit us. And I really love kids, I would show them everything!

For me it was always about the mountain and the horses, mules, cows, and sheep. That is what I grew up with. I can't imagine moving to the city nor would I ever move. Nowhere! I would rather be hungry here than leave. I love this place and I live for it! I enjoy everything and, even when it is hard, it's normal for me. A bear tears down the orchard, what can I do? A wolf slaughters

a horse. It's hard, but what can I do? Since the wolf, the bear and I live together. He fights for his and I fight for mine. People here are used to the hard life. It's simple: it is how it is.

I respect nature and she respects me

This is a waterless region. We only have ponds and 'live wells' which were built during the time of Maria Theresa. Last year Croatian Waters cleaned it thoroughly. We used to clean it before, but we no longer have the strength. When there were more people living here, everyone would do a little and together we were able to clean and maintain it. Now, there is no strength as most people have left Velebit in search of an easier life and an easier income. Some people find this desolated area interesting, they say it's gone wilder. And it did go wilder, in the full sense of the word because many species are disappearing, meadows are disappearing, the diversity which should have been protected is disappearing. No one will come to live here because it's a hard life. There is no road on this side of Velebit so nothing can be moved by car from our summer dwellings. Everything has to be carried on a donkey or on one's back. People nowadays are not willing to work so hard, suffer and agonize when there is an easier income available elsewhere. These places that I mentioned, I reach all of them by foot. I go and visit my father on Zavižan in the winter, when it snows, everywhere on foot! That's normal for me, I was born with that. I respect nature and she respects me.





The grasslands on Velebit are crucial for the survival of the strictly protected Apollo butterfly (*Parnassius apollo*).



The Lesser Kestrel (*Falco naumanni*) will colonise extensively used cultivated land when it finds a high prey density.



The large preserved forests complexes on Velebit are an important refuge for large carnivores like the Lynx (*Lynx lynx*).

A place for Wolf, Bear and Lynx

The Natura 2000 SCI site 'Nacionalni park Sjeverni Velebit' forms a part of the Northern Velebit National Park and is surrounded by another, even bigger protected area – the Nature park 'Velebit'. The latter spreads right across Croatia's largest mountain range and runs in parallel with the Adriatic coastline. It is part of the Dinaric Alps, which has been listed as a UNESCO biosphere reserve since 1978 due to its extraordinary biodiversity.

Northern Velebit harbours a range of different types of protected forests. These forests are an important habitat for large carnivores like the Brown Bear (*Ursus arctos*), Wolf (*Canis lupus*) and Lynx (*Lynx lynx*). The area is also renowned for its unique karst formations – rocks, screes, caves and cavernous pits - that are inhabited by a mysterious underworld fauna, most of which are endemic to the area. They host many relictual species, such as the critically endangered Dinaric Cave Clam (*Congeria kusceri*). The high level of endemism is caused by an unusual combination of geographic and climatic conditions that have enabled species to survive here since the Ice Age.

Farmed since ancient times

Another habitat that is extremely rich in endemic species is the grassland. With their abundance of flowers they are crucial for the survival of many butterfly species such as the strictly protected Apollo (*Parnassius apollo*) and the Large Blue (*Phengaris arion*) whose reproduction de-

pends entirely on the presence of thyme and ants from the genus *Myrmica*.

The majority of grasslands were created and maintained by people who inhabited Velebit since ancient times. In order to survive they built dwellings at different altitudes and moved with their cattle according to the seasons. Since this is a karst area, they built stonewalls in order to be able to use every available piece of land for farming and they kept their water ponds clean. Ruins of these ancient dwellings can still be seen today, reflecting man's once strong relationship with nature here.

Velebits' grasslands are however becoming overgrown due to the wholesale disappearance of local farmers. This abundant natural heritage which is deeply interlaced with the cultural heritage of Velebit, requires active conservation if it is to survive into the future. This means bringing back extensive pasturing and traditional farming so that they can continue maintain this unique centuries-old landscape.

The Natura 2000 site where Božo Vukušić works...

- is characterised by man-made stonewalls and dwellings
- is listed as a UNESCO biosphere reserve due to its extraordinary biodiversity
- is overgrown with bushes because of wholesale disappearance of farmers



My colleagues go to gym – I go to the fields

Dražen Rendulić

After his office work in Zagreb, Dražen Rendulić travels to Modruš – a town in Lika where he grew up. Together with his family, he produces organic cereals and vegetables. They grind the cereals into flour on an old water mill that has been in their family for generations. They produce corn, wheat and traditional smisno flour, focussing on products that could be offered on the local market. The direct contact with the buyer is important for them. Even though it's hard to work on two jobs, Dražen's time spent in Modruš completes him. It's something that's his, and he wouldn't change it for anything in the world.



The family farm Rendulić consists of three families: my parents, brother, sister and her family, me and my family. We are situated in Modruš, a village close to Josipdol in Lika. We work on, what to us feels like, a big farm. We have 2 and half hectares of fields where we grow cereals – wheat, corn and millet, and vegetables – primarily garlic, beans and potatoes, as well as smaller quantities of carrots and peas. We grind the cereals on our water mill. At this moment we produce corn flour, wheat flour and 'smisno flour' which is a mixture of corn, wheat and millet flour for making the traditional 'smisno bread'. It's 'labour bread' but it's actually one of the best whole grain breads around.

We work on the principles of organic agriculture. When we were just starting out we decided to focus on products that could be offered on the market for a longer period, such as flour, garlic and beans. We want to have a direct contact with our buyers, not with big suppliers. We also now cooperate with one store which promotes small Croatian producers. Our ambition is to start cooperating with a few additional stores of that type and to be present on fairs.

Amazement about such diverse farms

It is hard to live solely from agriculture in Lika since the fields are not as big as in Slavonia. Our 2 and half hectares are a lot. We are all involved in the work. I'm more involved in planning and marketing, but also of course in all types of phys-

ical work on the farm. After the office work in Zagreb, it is a form of relaxation for me. I'm in Zagreb in the mornings and after that I travel to Modruš. My colleagues go to the gym and I go to the fields! When I told them "I have my own flour, garlic and potato, do you want to try it?" they were surprised because a person doesn't usually reveal all about himself in his workplace. But my work in agriculture was very well accepted in the company and my colleagues are positively affected by the fact that something like this exists.

Each product is touched by our hands

One part of the knowledge I got from my parents. They have the experience, they know what kind of soil is where and that is priceless. The other part of my knowledge I got from the university since I studied agriculture. Lika is primarily a livestock region and my parents were also oriented towards livestock. Cereals were primarily cultivated for cattle, so a certain twist in mindset was required in order to see the potential of an unused water mill and the production of flour. I had to pass on enthusiasm for vegetable and cereal cultivation to my parents but the results are now visible. Our products are unique because of their limited quantities, each product is touched by our hands; Wheat is manually mixed, sifted and every bag of flour is packed manually.

This water mill has always been in our family. My great-grandfather's uncle made a house that



"It's important that young people return and take over a part of the workload so that everything can stay preserved in this way."

had a saw-mill in its upper part and a water mill in the lower part. The whole village used the mill to grind their cereal. Over time the wheel and other wooden parts got worn out so we decided to renovate them. In my opinion, the success of renovating a unique old water mill can't be compared to any other business success. It's not about profit, it's about the pleasure of bringing something back to life and returning it to its original state. That's a special type of pleasure!

The meadow is so beautiful because we mow it
The work and stay in Modruš is very relaxing for me. It's something that's mine and I wouldn't change it for anything in the world. It has no price. My favourite place is the meadow Zlatarića. It has been in the family for ages so that is how it got this name. We have other parcels which are better for agriculture, but this one is really for enjoyment. Everyone in my family used to come here for enjoyment, football, barbecue, cow grazing, potato harvest, mushroom picking in the autumn. It has many aspects, which are unique in some way: penny buns grow here, meadow mushrooms over there, and every season has its own delights. We also have one garden here where we grow all kinds of vegetables in smaller quantities. You enter it, pluck out a carrot, some potatoes, then we set up a bonfire, bake some potatoes in the cinder, and continue with harvesting string-beans, tomatoes and so on until the potatoes are done. Deer, rabbits and wild boars also come to feast on the meadow.

Here I feel like the time has stopped, like I'm still a kid. For me this is the most peaceful place. A place where I feel well, where I relax from the noise of the city and the work in the fields. It's nothing special but lots of memories connect me to this place. I grew up in Modruš, moved to Zagreb and now I'm slowly returning. I see that people from the cities nowadays experience nature as a vacation. If you are living here, then you experience a part of the nature that is related to work. This particular meadow is so beautiful because we mow it, because we take care of it.

The area needs the strength of young people
It is becoming increasingly evident that there are fewer and fewer people here. Everything is starting to turn to squalor and nature is taking back what was once hers. Forests are spreading everywhere. There fewer paths and some meadows have disappeared completely. Meadows and paths are something that a farmer living here has contributed to, he has tamed the nature. And tamed doesn't necessarily mean violated. A lot of young people left this region and that is visible because older people, including my parents, slowly lose their strength. It's important that young people return and take over a part of the workload so that everything can stay preserved in this way. It is my wish that my daughter will also come here one day to play with her friends, to camp or to make a barbecue.





The olm (*Proteus anguinus*) is the only cave-dwelling chordate species in Europe.



Ogulinsko is a site of international importance for the Common Bent-wing Bat (*Miniopterus schreibersii*).



The endemic Croatian pink (*Dianthus giganteus ssp. croaticus*) grows on patches of rich mountain meadows.

A land of streams and ponds

The Natura 2000 SCI site 'Ogulinsko-plašćansko područje' covers a vast valley extending over 330 km² in the mountainous region of Croatia, near the town of Ogulin. This area is important for the conservation of Illyrian oak-hornbeam forests (*Erythronio-Carpinion*) which are home to many colourful plant species such as the vulnerable Christmas Rose (*Helleborus niger ssp. macranthus*). In some places these forests open up to reveal pockets of rich mountain meadows where rare plants grow, such as the endemic Croatian pink (*Dianthus giganteus ssp. croaticus*), Early Spider Orchid (*Ophrys sphegodes*) and Toothed Orchid (*Orchis tridentata*).

These and numerous other grassland species are threatened by the loss of habitat, caused primarily by secondary succession. The area was once famous for its traditional pasturing and mowing, but having been strongly affected by rural depopulation, all that has come virtually to an end. Freshwater habitats are another important characteristic of this site. Numerous streams and ponds and their surrounding wetland areas are home to plant species like the critically endangered Fen Bedstraw (*Galium uliginosum*) and the endangered Mare's-Tail (*Hippuris vulgaris*) as well as the Marsh fritillary butterfly (*Euphydryas aurinia*), the Stone Crayfish (*Austropotamobius torrentium*) and the Yellow-bellied Toad (*Bombina variegata*).

Unknown life in secrecy

Pollution and changes in water regimes strongly affect this site's most extraordinary but also its most vulnerable habitats – the caves. This is one of the most abundant regions in Croatia in terms of cave fauna biodiversity and new species are being discovered to this day. Several species which are of national importance have been identified here, such as the only subterranean serpulid in the world, the Dinaric Tube-worm (*Marifugia cavatica*), the only subterranean cnidarian in the world, the Enigmatic velkovrha (*Velkovrha enigmatica*) and the only subterranean freshwater sponge, the Ogulin cave sponge (*Eunapius subterraneus*). The relentless trend in land abandonment in this region has a very negative influence on habitats such as the grasslands. If they are to survive, their management, as well as the future development of this rural area, needs to be based on activities that won't endanger the valuable underground habitats (eg by obstruction or ground water pollution), such as the traditional, low-scale farming and livestock breeding.

The Natura 2000 site where Dražen Rendulić works...

- needs small scale agriculture to protect the diversified landscape
- is a sensitive area characterised by water
- is home of some extraordinary and rare species

