IIW GENOA 2025

78th Annual Assembly and International Conference

June 22/27, 2025 - Genoa, Italy

WELDED ART PHOTOGRAPHIC EXHIBITION

PROGRESSING BIODIVERSITY

IIW 2025 DIGITAL COLLECTION

Welcome Message

Thomas Böllinghaus
IIW President 2023-2026

IIW was founded in 1948 by the welding institutes or societies of 13 countries that considered it crucial to make more rapid scientific and technical progress in welding possible on a global basis. Its membership today comprises welding organisations from 54 countries worldwide.

With its Technical Commissions and education, training, qualification and certification networks, IIW has a global influence in many areas. Young people are becoming more aware and active in the need to both protect and improve biodiversity and many of the technological outputs from the work of IIW's members does have direct benefits on improving biodiversity.

As President of the International Institute of Welding (IIW), it is my privilege to welcome you to view our sixth IIW Digital Collection of Welded Art, and for you to enjoy the 2025 submissions related to both improving welding skills and progressing the need to raise awareness of the necessity to protect biodiversity.

IIW has always sought to involve more young people through its activities such as its Young Professionals Programmes. This IIW initiative on welded art which started in 2019, also has a similar positive effect with more and more schools, colleges and universities becoming involved in both their national welded art exhibitions and competitions as well as the IIW ones.

These unique cooperative and collaborative efforts between so many countries truly assist in progressing biodiversity.

We are proud that this IIW 2025 Digital Collection also shows the excellent IIW ethos of cooperation and collaboration with over 40 artists from 11 countries contributing to creating greater awareness of the importance of the relationship of the global welding industry to biodiversity.

Please enjoy and pass the Collection onto your friends and colleagues.

Thomas Böllinghaus, IIW President 2023-26

1st June 2025

Acknowledgements

We extend our sincere thanks and appreciation to everybody who has participated with great enthusiasm in helping to achieve our objective to demonstrate the value and benefits of welding, welding skills and welded art in the promotion and improvement of biodiversity.

As usual, the interactions between the Exhibition Editor and Coordinator, Chris Smallbone, and artists have all been outstanding, and the contributions greatly appreciated, particularly as involvement is entirely voluntary. Over 40 artists including career artists, hobby artists, students at schools and colleges, from 11 countries have participated. These countries are: Australia, Bulgaria, Canada, England, India, Kazakhstan, Romania, Spain, Ukraine, USA and Wales.

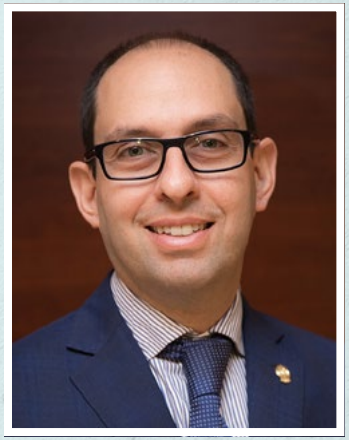
Thanks must also go to those organisations which promoted the exhibition in their countries, and it is hoped that their examples will encourage others to provide similar promotion, support and involvement next year.

It is also a pleasure to see the enthusiasm for welded art building up in schools and national skills organisations. In particular, the section of the Collection featuring individuals and organisations in Brazil, Bulgaria, Canada, England, India, USA and Wales, who dedicate their efforts to improving welding skills in the youth, are to be admired.

We also acknowledge the many experts, practitioners and policymakers in the welding and related industries for sharing not only technical information and innovation, but expertise in all areas affecting a country's ability to improve biodiversity and fulfil their responsibilities in a cooperative and converging global community. Through its membership and programmes, IIW is in the position to assist Countries of the world to improve their welding industries, welding skills and biodiversity.

Luca Costa, IIW Chief Executive Officer

1st June 2025



Luca Costa
IIW Chief Executive Officer

Foreword

Since 2019 when we first introduced the IIW welded art photographic exhibition, I have been amazed at the goodwill shown by so many people in supporting and participating in the holding of each subsequent exhibition. I believe that the theme of each exhibition has enabled this success.

I have always been an advocate for the benefits of welding and the welding industry in improving the quality of life for all on this planet. As IIW President, in 2005, I introduced a project titled “Improving the global quality of life through optimum use of welding technology” leading on to an IIW project in 2013 involving improving a country’s national welding capability and hence quality of life.

The improvement and protection of biodiversity has always been a significant issue which I believe needs continuously promoting as an integral part of such projects. It often appears to be an uphill battle when one sees on a daily basis the terrible conditions inflicted upon both humans and animals in many places across the world.

The biodiversity theme this year has resonated with many young people who, with the support of their instructors and educational institutions, have enquired about participation as well as opportunities for competitions in their own countries. We have included sections for some special organisations and people who have inspired people to participate in welding skills and welded art.

It is encouraging to see the Intergovernmental Science Policy Platform on Biodiversity and Ecosystems Services (IPBES) and the European Union in Namibia in December 2024, highlighting the opportunities in terms of both jobs and money, but we need to address the challenges facing biodiversity without delay.

Chris Smallbone
Editor and Exhibition Co-ordinator
IIW President 2005-2008

An important challenge for the global welding industry and IIW and its members is how to encourage young people to see and engage in the opportunities which can be made available by the welding industry through projects aimed at improving biodiversity. The future of any country is primarily in the development of its youth.

The IIW welded art photographic exhibition is just one small part of suggesting solutions.

Welding Opportunities through the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

A key **objective** of the **IIW 2025 Digital Collection Welded Art Photographic Exhibition: Progressing Biodiversity** is to promote greater awareness to people at all ages worldwide, of the need to protect the world's life supporting biodiversity. Biodiversity includes all the variety of life that can be found on earth such as fauna and flora (plants and animals) and their habitat, including soil, seedbanks and water.

Biodiversity is under great threat globally, and its loss is often irreversible.

The range of submissions to the IIW welded art exhibition brings out the artists' personal attachments to biodiversity as well as showing that biodiversity is not just about animals but also opportunities for humans including improving their quality of life.

With almost 150 member Governments, the **Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)** is the global body that assesses the state of biodiversity and nature's contributions to people in response to requests from decision-makers, and outlines options for the future based on different socio-economic choices. The mission of IPBES is to strengthen policy and decisions through science, for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development.

The IPBES secretariat is hosted by the German Government and located on the UN campus in Bonn. Several thousand scientists worldwide contribute to the work of IPBES on a voluntary basis. They are nominated by their Governments or organisations and selected by the IPBES Multidisciplinary Expert Panel.

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) conducted its second global assessment on biodiversity and ecosystem services in 2024. This assessment, including the "Nexus Report," focuses on the interconnectedness of biodiversity, water, food, health, and climate, and how they impact each other. The Nexus Report was launched on December 17, 2024 in Namibia.

According to the two new reports by IPBES, immediate action to address the biodiversity crisis could unlock massive business and innovation opportunities, generating US$10 trillion and supporting 395 million jobs worldwide by 2030.

Welding Opportunities through the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) *(Cont.)*

Conversely, delaying action on biodiversity goals by even a decade could double the cost of acting now and delaying action on climate change adds at least US$500 billion per year in additional costs.

The reports emphasise that without urgent and joint action to address interdependent global challenges such as biodiversity loss, water scarcity, food security, human health, and climate change, we will not achieve a just and sustainable world where all life can thrive.

The European Union (EU) has made several contributions to the IPBES 11th Plenary, including publishing a new report on “transformative change for a sustainable future” analysing the challenges and opportunities of over 300 ground-breaking projects.

IIW, The Global Welding Industry and their Potential Contributions to Improving Biodiversity

The **Transformative Change assessment** report focuses on the underlying causes of the biodiversity crisis, the drivers of change and options for achieving a system-wide reorganisation for a fair and sustainable future.

It calls for a “whole-of-society” approach to addressing the biodiversity crisis, meaning that there is a role for every person and organisation to create transformative change at multiple levels.

IIW with its Technical Commissions and extensive education and training networks can play a key role in identifying many opportunities to create such change.

People need to know the challenges and possible solutions in order to do something to protect and restore biodiversity. There are many ways that the Welding Industry, including individuals, communities and organisations can support this. Examples of potential projects are given in the IIW Report **The Importance of a Country’s Welding Industry, Its National Welding Capability (NWC) and Their Significance to the UN Sustainable Development Goals (SDGs)**, freely available globally.

Please follow the link https://iiwelding.org/iiw-jointothefuture/iiw-and-sustainable-development/ to the Long Report Volume 2 “Potential National Welding Capability Welding Industry Projects and Resources”.

One project, among many, which can be applied on a global basis by many countries, is the use of welded art which provides a number of other benefits. As a hobby, it can help to improve mental health and may be therapeutic, it is a wonderful tool to improve the image of welding and in some cases may provide an income for people with the appropriate artistic skills.

In this Collection, a very good example is SkillsUSA which has been holding Welding Sculpture competitions since 2010 at local, State and national levels.

IIW, on a similar basis to international organisations such as ISO and IEC, is also a supporter of the United Nations (UN) project to continuously improve, both locally and globally, the 17 UN Sustainable Development Goals (SDGs) agreed to by world leaders in 2015. http://en.wikipedia.org/wiki/Sustainable Development Goals

IIW, The Global Welding Industry and their Potential Contributions to Improving Biodiversity *(Cont.)*

The UN has 193 member countries and the aim is to improve the quality of life particularly in low and medium income countries. Each UN country is encouraged to measure its progress on an annual basis against the targets and indicators set against each SDG. www.sdgindex.org

The Welding Industry in each country can play a significant role in this.

UN SDGs closely allied to biodiversity are:

SDG 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

SDG 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

IIW Welded Art Exhibits and Terrestrial Biodiversity

Exhibits related to **Terrestrial biodiversity** include some from the **SkillsUSA and Young Bulgarian Welders competitions**, as well as **Sergey Minakov (Ukraine) with Biodiversity of My Region** and that of **Jackie Morris (Canada), Roots Required**.

Land animal exhibits include **Hilary Clark Cole, GW Graham Secondary School Team, Lyndon Gould and Danek West (all from Canada) with bears, Alin Bagarti (India) and Andrey Makhorin (Kazakhstan) with snakes, Owen Croft (England) with a Dobermann, Ricard Mira (Spain), a Lynx and the SVNIT Team from India with a Lion.**

Terrestrial biodiversity is the variety of life forms on the land surface of the Earth. A terrestrial ecosystem is a land-based community of organisms and the interaction of biotic and abiotic components in a given area. Examples of terrestrial ecosystems include the tundra, taigas, temperate deciduous forests, tropical rainforests, grasslands, and deserts.

The health and well-being of the natural world is critical to our survival but it is under increasing stress with human activity altering 75% of the earth's surface and wildlife and nature are being squeezed into an ever-decreasing percentage of the planet.

With around 1.6b people depending on forests for their livelihoods and 2.6b people depending directly on agriculture to earn a living, the challenges are formidable. Luis Huertas Tamayo (Spain) with his exhibit **War and Peace** illustrates such challenges.

UN SDG 15 aims to conserve and restore the use of terrestrial ecosystems such as forests, wetlands, drylands and mountains. Halting deforestation is vital to mitigate climate change but it is also vital for stopping the loss of natural habitat which is leading to the disastrous loss of so many animals including the wanton cruelty which often accompanies this.

The exhibit **The Welsh Knife Dragon by John Freeman (Wales)** is included in the Collection to show mythological links with biodiversity. The connection between mythological dragons and biodiversity lies in the fact that dragons, as mythical creatures, are not entirely divorced from the natural world. Their portrayal reflects how ancient cultures perceived the environment, the animals within it, and their place in the broader cosmos. Furthermore, the very existence of dragon legends might be intertwined with our understanding of biodiversity, as evidenced by potential fossil inspirations and the diverse forms dragons take in different regions.

IIW Welded Art Exhibits, Insects and Biodiversity

Exhibits related to **Insects and Biodiversity** include those by **Anna Frlan (Canada), The Navigators (Bees, Birds and Butterflies), and Emily Stewart (USA), Forged in Silence: Wings of Change.**

The importance of insects to a country's food security can be seen by the importance placed on this by governments such as the UK Government which published the report **Insect decline and UK food security Government Response** on 7th February 2025. http://publications.parliament.uk/pa/cm5901/cmselect/cmsctech/717/report.html

The decline in the Insect population is more catastrophic than is realised. Insects are the keystone of the food chain and their decline affects ecosystems, and animal populations, including humans. Insects are at the structural and functional base of many of the world's ecosystems and a 2019 global review warned that, if not mitigated by decisive action, the decline would have a catastrophic impact on the planet's ecosystems.

Although many people think of insects as pests, in fact they make our world a better place, keeping nature balanced and playing an important part in our food web. Besides pollinating plants and helping decompose waste and organic matter, they control pest populations as well as being an important food source. In short they can be inspirational.

Bees are an immediately relatable insect. They provide honey, which is not only delicious to eat, but also is an important anti-bacterial utilised in many forms in a medicinal and cosmetic context.

Unfortunately, several studies report a substantial decline in insect population although the causes of the decline do not appear to be fully understood. Some of the insects most affected include bees, butterflies, moths, beetles, dragonflies and damselflies.

Possible causes are similar to other biodiversity loss, with studies identifying: habitat destruction, intensive agriculture; the use of pesticides (particularly insecticides); urbanisation and industrialization; introduced species, climate change, pollution, artificial lighting and eutrophication from fertilisers.

IIW Welded Art Exhibits, Birds and Biodiversity

Exhibits related to **Birds and Biodiversity** are shown in examples from **Hilary Clark Cole (Canada)-Swallows, Ann Gildner (USA)-Red Cardinals, Georgie Seccull (Australia)- Lyrebirds, Zavaczki Walter-Levente (Romania) and Ian Lowe (Canada)-Eagles, Rodrigo Spinelli (Spain)-Herons.**

Bird diversity helps everyone since birds play countless roles in healthy ecosystems in ways which impact human health, economy and food production. As vital members of ecosystems, birds play many roles, including as predators, pollinators, scavengers, seed dispersers, seed predators, and ecosystem engineers.

Birds are great seed spreaders bringing plants back to ecosystems that have been destroyed and even carry seeds across the sea to new land masses thus linking ecosystem processes and fluxes that may be separated by great distances and times.

Their spore-spreading can keep entire forests healthy. They can transform entire landscapes such as forests, marshes and grasslands by helping maintain the delicate balance between plant and herbivore, predator and prey. Seabirds in particular, play a key role in cycling nutrients and helping to fertilise marine ecosystems such as coral reefs, thus keeping them alive. Their guano is also useful as organic fertiliser.

It has also been stated that in effect, birds act as barometers for planetary health, allowing us to ‘take the pulse of the planet’. In the face of accelerating biodiversity loss, there is a need for widespread public support for conservation efforts.

To increase the understanding of biodiversity issues, it is worthwhile to consider a German study **Unlocking biodiversity awareness: influential factors on bird species knowledge and the links with environmental attitudes and connectedness to nature.**

http://www.tandfonline.com/doi/full/10.1080/21548455.2024.2381840#abstract

IIW Welded Art Exhibits, Oceans and Biodiversity

Exhibits related to showing the importance of biodiversity in the oceans include wonderful creations by **Jason deCaires Taylor (England), Mike van Dam (Australia), Ian Lowe (Canada), Ann Gildner (USA), Vinit Barot (India), Courtney Chard (Canada), Connor Mullen (USA) and Emerald Papke (USA).**

Sir David Attenborough's most recent documentary is "Ocean with David Attenborough," which explores the wonders and challenges of the ocean, while also highlighting the need for its preservation. The film, released in May 2025, showcases the ocean's importance for global stability and highlights the impact of human activities like destructive and wasteful fishing techniques. It also includes inspiring stories of ocean recovery, offering a message of hope for the future.

The film premiered on National Geographic on Saturday, June 7, at 9/8c and was available to stream globally the next day, World Oceans Day, on Disney+ and Hulu.

Besides the direct benefits to humans of the oceans providing food, jobs, livelihoods and wellbeing, they also help us breathe, fight climate change and are home to vast biodiversity.

Although many fishers take their ocean stewardship roles seriously, too many people and nations take the oceans for granted, thinking the oceans are just too big to get hurt and yet we don't see what is below the waves.

Some people and nations are shortsighted and appear intent on destroying that which is critical to our survival. In October 2021, the UN Human Rights Council recognised for the first time that a clean, healthy and sustainable environment is a human right. We all have a responsibility, even in the smallest way, to combat the negative activities which take place every day in our oceans.

IIW Welded Art Exhibits, Trees and Biodiversity

Exhibits featuring trees include **Richard Moffatt (Australia)** with **The Davar Giving Tree** and **K Selvakumar**, from the **Welding Research Institute (WRI)** in **India** with **KALPA*WRI*KSHA**.

Trees are an essential component of life on earth. They provide oxygen and limit carbon in the atmosphere. They reduce air pollution, provide food and shelter for wildlife, minimise erosion and maintain healthy soil, increase rainfall and absorb sunlight as energy and overall, improve the environment and help mitigate climate change via carbon capture thus reducing CO2 and greenhouse gases in the atmosphere, amongst many other attributes.

Deforestation is a critical issue worldwide. In so many areas of the world forests are disappearing including the Amazon Rainforest for mining, farming etc, forests for palm oil plantations, the burning of forests for charcoal, the destruction of habitat and food sources for housing development and transmission lines, and worldwide, illegal logging which is a blight on forests.

Even at a local level in countries, people can implement projects to protect trees and habitat for wildlife. For example, Ku-ring-gai Council in New South Wales, Australia, funded the installation of 113 salvaged natural hollows in back yards in the Ku-ring-gai Local Government Area. 55% of hollows inspected showed signs of use by at least 9 different native fauna species.

http://www.krg.nsw.gov.au/Environment/Your-local-environment/Wildlife/Wildlife-management/Nest-boxes
People can download the full report from the site.

Credit is given To WildThings NSW for information from document IIW NWC-0028-2024 WildThings NSW Virtual Welded Art Biodiversity Photographic Exhibition & Digital Collection in IIW NWC Resource. Centre. IIW and sustainable development - International Institute of Welding **and to various references on the internet particularly giving information on biodiversity.**

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Career Artists

We are privileged to have 18 exhibits from 12 career artists to help promote the need to improve biodiversity around the world. These artists have extensive bodies of work and have consistently garnered national and international acclaim. In many cases, their work has been acquired by patrons, collectors, institutions, public bodies and retains a value that reflects this success.

1 . **Jason deCaires Taylor (United Kingdom)** is an accomplished sculpture, environmentalist and underwater photographer famous for creating underwater museums and sculpture parks with over 1200 artworks being submerged throughout the world's oceans and seas. These include locations in Mexico, Grenada, United Kingdom, Bahamas, Maldives, Spain, Indonesia, Norway, France, Cyprus and Australia. Great enjoyment will be had by visiting each of these, either in person or virtually, and experience the wonderful sculptures including artificial reefs created. In this Collection, **Ocean Siren** and **Molly Steer** are featured.

2. **Luis Huertas Tamayo (Spain)** is an artist with a deep concern for the protection of the Earth's biodiversity, as well as a profound respect for the environment. He feels that we seem to have continuous challenges created by human-caused problems such as deforestation, rapid habitat loss, wildlife exploitation, or military conflicts, among others, such that we seem to be in a constant war to combat these challenges. His Exhibit **War and Peace** contrasts this with the emergence of harmony and peace, by the fact that all species can exist in the absence of such pressures and all contribute to a healthy earth.

3. **Mike van Dam (Australia)** is an award-winning and internationally recognised artist who has a strong background in creating iconic and important sculptures that have been placed all over the world and have attracted various prestigious artistic awards. Besides being a great supporter of progressing biodiversity, Mike's work is often sea or marine-life themed, which he attributes to his life-long love of being in and around water. His exhibits here feature his **Seahorse** and **Dolphin.**

Career Artists *(Cont.)*

4. **Ian Lowe (Canada)** is based on beautiful Vancouver Island in British Columbia.As a person who transitioned from a full time position in the welding and fabrication industry to a full time artist, his work is inspired by the biodiversity of the West Coast, capturing the delicate balance between wildlife, land, and ocean in stainless steel, often incorporating wood and stone. His **Seafood Montage** and **Colossal the Giant Squid** illustrate the importance of marine resources both to the environment and the fishing industry. **Eternity** is a sculpture honouring the Bald Eagle. The biodiversity of the Bald Eagles on Vancouver Island is currently threatened by deforestation, shoreline development and pesticides accumulated through the food chain.

5. **Ann Gildner (USA)** has always recognised that biodiversity in Michigan and the North American Great Lakes is of major significance with the lakes being the world's largest freshwater ecosystem including irreplaceable biological features like coastal plants and animals, deep-water fish, and the world's largest system of freshwater dunes. Her exhibit **Fish** illustrates the importance of the fishing industry and her exhibit **Red Cardinals in a Dogwood** symbolises the joy these birds bring to people in everyday life.

6. **Georgie Seccull (Australia)** is a sculptor and installation artist based in Melbourne, Australia. She creates large-scale stainless steel sculptures of animals and other creatures seemingly locked in motion. Composed of numerous pieces cut from metal sheets, the materials lend themselves to organic forms like feathers, scales, wings, or the armaments of crustaceans. Georgia feels that Lyrebirds have always been incredibly mysterious and majestic with their fantastic plumage and endless repertoire of mimicking sounds. She thinks of them fondly as the gatekeepers of the forests they inhabit, hence her exhibit **Gatekeeper.**

7. **Zavaczki Walter-Levente (Romania)** reuses industrial materials to emphasise sustainability and environmental awareness. The eagle is a recurring motif in Walter-Levente's artistic work, representing strength, vision, and the human–nature relationship. His sculpture **Steel and Zinc Eagle** refers to the biodiversity of mountainous regions, where birds of prey play a crucial ecological role. The eagle is not only a symbol of strength and identity, but also a key species in many ecosystems. In recent decades, the habitat of certain eagle species has decreased, though conservation efforts have shown promising results.

Career Artists *(Cont.)*

8. **Rodrigo Spinelli (Spain)** dedicates his work to defending nature and diversity, earning international recognition. His work explores the intrinsic connection between humanity and nature, using sculpture as a tool for environmental advocacy. By highlighting the resilience, diversity, and vulnerability of natural forms, he aims to foster awareness and respect for ecosystems. Rodrigo was inspired to express, in his sculpture, **The Elegant Flight of the Heron**, the duality between the material's weight and the lightness of flight, strength and the delicacy of the legs, and the unique poetic curve of the neck.

9. **Anna Frlan (Canada)** researched the biodiversity of bees, birds and butterflies in Ottawa and their inherent navigational abilities. For her exhibit, which was commissioned by the City of Ottawa and OC Transpo, Anna's objective in creating **The Navigators (Bees, Birds and Butterflies)** was to introduce natural references to the busy traffic corridor of Rideau Street in Ottawa. She created thirteen sculptures installed behind the glass walls of three bus shelters for this exhibit. Symbolic elements were water jet cut into stainless steel plate, comparing the intelligent navigational abilities of Ottawa's bees, birds and butterflies to the need for safe navigation of OC Transpo buses and passengers.

10. **Richard Moffatt (Australia)** has spent his life working with metal both as a qualified artisan welder and a full time artist. Among his range of sculptures, trees have always held a fascination for him. A tree is a living entity giving shelter and support to its community. At a glance it is a single form but with contemplation one discovers a thriving community within its canopy. **The Davar Giving Tree** represents caring and support at its core. It was gifted by the Davar Family to the Sydney Adventist Hospital (SAN) as a symbol of everlasting generosity and recognition.

11. **Hilary Clark Cole (Canada)** works mainly in hand-built welded steel artwork, which can be very small or very large, rough or smooth, monochromatic or colourful. In particular, they often reflect the importance of biodiversity related to her home country. Her two exhibits illustrate this with the delicate **Tree Swallow and Young** being like making a piece of jewellery and the lifesize **Grizzly Bears, Mother and Two Cubs** which took a year to complete. Her work has been described as "In the world of welding women, her creative spirit has no equal…..
Lyrical and beautiful, infused with joy and humour, hard cold steel comes alive".

Career Artists *(Cont.)*

12. **Ricard Mira (Spain)** has chosen the Iberian Lynx for his exhibit. **Hopeful Lynx** is the head of a male Iberian lynx made with welded steel and inox in Ricard's style, which he calls cold forging. It combines fullness and emptiness, as is usual in his human representations.

    The Iberian Lynx has suffered major decline in the past due to poaching, habitat loss, fluctuations in the rabbit population (its food), road kill and diseases from domestic cats. A major collaborative effort with significant success has taken place with the support of many organisations and the European Union LIFE Project to reintroduce the lynx in Spain and Portugal including restoring its habitat.

13 **Vinit Barot (India)** has many examples of animal sculptures which he has created and installed at various locations in India. In this particular exhibition, the sculpture **Croc Mother and Child** which has been installed near the middle entry gate towards the Enquiry Counter at the Vadodora Railway Station, is that of a Mugger Crocodile. Such crocodiles are found close by in the Vishwamitri River. A special platform has been created for the exhibit so citizens can click "Selfies" with it. One idea of this sculpture is to sensitize people about caring for their living Heritage-the crocodiles in the region.

Click here for video

Jason deCaires Taylor *(United Kingdom)*

Jason deCaires Taylor is an accomplished sculpture, environmentalist and underwater photographer famous for creating underwater museums and sculpture parks with over 1200 artworks being submerged throughout the world's oceans and seas. These include locations in Mexico, Grenada, United Kingdom, Bahamas, Maldives, Spain, Indonesia, Norway, France, Cyprus and Australia.

Each artwork has become an artificial reef which can be visited by people to witness and appreciate the wonderful marine environment without the danger of damaging other sensitive areas.

https://underwatersculpture.com/

The Great Barrier Reef off the east coast of Australia is a treasure and holds immense ecological and economic significance as one of the most biodiverse ecosystems on the planet. It provides critical habitat for marine species, acts as a natural barrier against storms, and contributes to the economy through tourism and fishing.

Despite the threats from coral bleaching, pollution and overfishing, the reef displays remarkable resilience as showcased through Jason deCaires Taylor's stunning underwater installation, Museum of Underwater Art (MOUA), off the coast between Townsville and Magnetic Island on John Brewer Reef.

There are dozens of underwater installations including the Coral Greenhouse, which holds the Guinness World Record for the largest underwater art structure and the Ocean Sentinels

Tours are available for people to enjoy multiple days of diving, snorkelling and exploring the marine science, coral gardening, art and architecture.

Contact info

Email: info@underwatersculpture.com

Websites: https://underwatersculpture.com/about/biography/
MOUA / Museum of Underwater Art

Exhibit “Molly Steer”

Molly Steer is a remarkable young activist who took action against plastic straws at the age of nine. Inspired by the documentary ‘A Plastic Ocean,’ Molly embarked on a mission to eliminate single-use plastic straws by encouraging schools across Australia to join her ‘Straw No More’ movement. Her initiative has garnered support from over 3,000 schools in Australia and has gained traction globally with hundreds of thousands of individuals pledging to stop using plastic straws. Molly’s campaign showcases the power of young voices in effecting real change.

In the sculpture created by Jason, Molly stands beside a pillar made of straws representing the detrimental impact of plastic waste. The formation of the straws at the base of the sculpture aims to create an intriguing habitat for marine life, symbolising the need to protect our oceans and the species that inhabit them.

Although the sculpture is cast concrete, it has a welded stainless armature. In sculpting, an armature is a foundational internal framework or skeleton that provides support and structure to a sculpture.

Dimensions of Exhibit

220 cm high x 170 cm wide x 170 cm deep

Molly Steer
Jason deCaires Taylor

Molly Steer
Jason deCaires Taylor

Exhibit “Ocean Siren”

Jason’s “Ocean Siren” is a 4m high sculpture serving as a warning system about the warming seas threat to the Great Barrier Reef. It is located off the Strand Promenade on Townsville’s seafront, and was inspired by Takoda Johnson, a young indigenous girl from the Wulgurukaba tribe. Ocean Siren - Underwater Sculpture by Jason deCaires Taylor

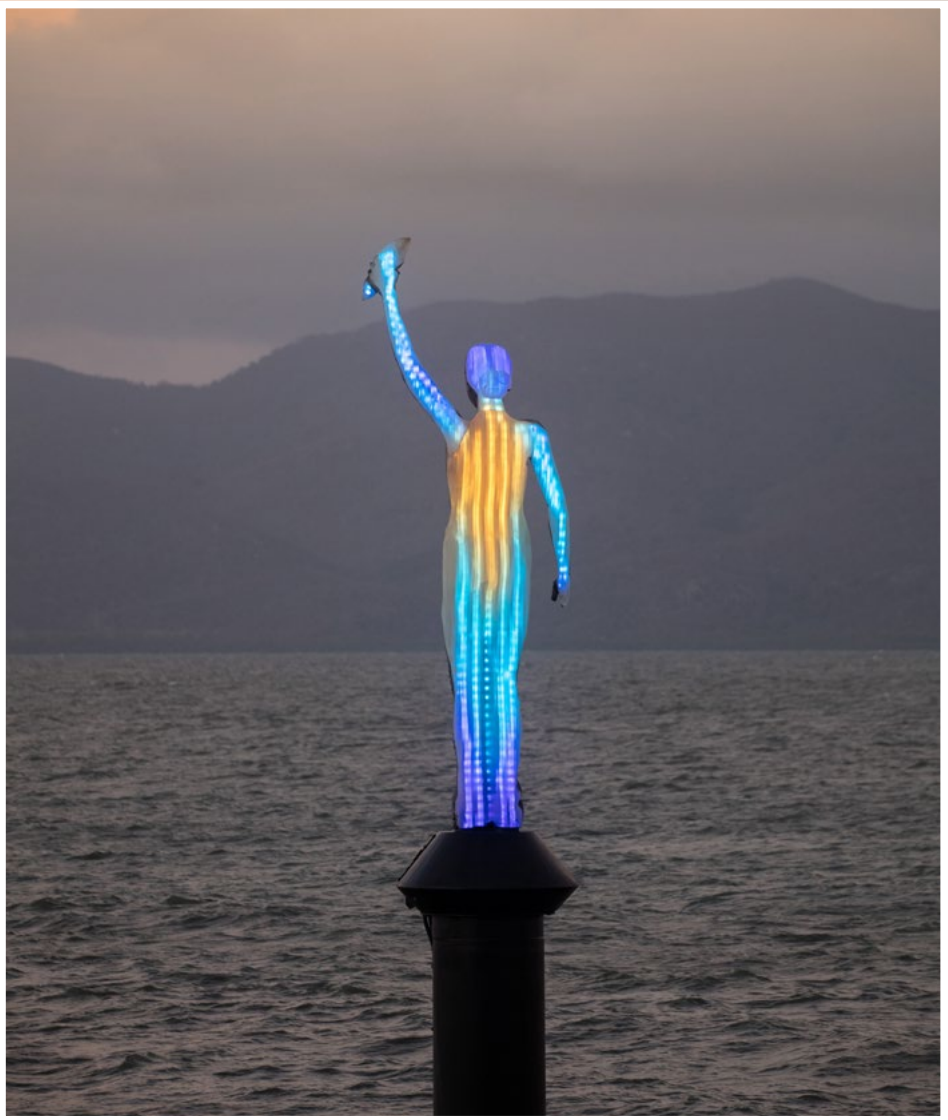
Takoda is shown in the sculpture holding a traditional indigenous communication device, a Bayliss shell, while looking to Magnetic Island and the Great Barrier Reef. Based on daily water temperature data from an Australian Institute of Marine Science (AIMS) weather station on Davis Reef, the colour of the sculpture changes at night.

This visual representation of current conditions helps raise awareness about the risks of warming seas to coral reefs. The structure of the sculpture is fabricated in two halves. The half facing the ocean from 316 stainless steel welded plate and that facing the shore highly durable translucent acrylic.

The structure remains out of the water at all times and features a matrix of 202 multi-coloured LED lights that are illuminated each day at sunset and the figure gradually changes colour from the centre of the figure to its extremities, similar to a heat sensing camera image. The sculpture aims to bring reef science to people globally in a live, visual, and impactful manner, helping to convey a clear message about this complex issue.

Dimensions of Exhibit

4m high figure and elevated 6m above the seabed



Ocean Siren
Jason deCaires Taylor

Ocean Siren
Jason deCaires Taylor

Luis Huertas Tamayo *(Spain)*

Luis Huertas Tamayo lives in Sant Fost de Campsentalles, Spain. He studied agricultural engineering at the Barcelona School of Agricultural Engineering in the class of 1989.

Luis is self-taught, in large part both in the profession in which he earned his living during his working life as a builder, and in the art world, through his work in sculpture, jewelry and marquetry. He likes combining natural materials such as stone, wood, glass and steel in his sculptures.

He has a deep concern for the protection of the Earth's biodiversity, as well as a profound respect for the environment.

He believes that trash is anything that is in the wrong place and that some waste materials deserve a second chance, and if this opportunity is given through art, this "trash" is transformed into something more beautiful. And precisely what art often does is offer the opportunity to see things differently and discover other worlds that already exist in this one. If we only made things that could be recycled, and if they were recycled, and if we showed greater respect for other animal species, we would have a healthier ecosystem with greater harmony on this planet.

The major challenges facing both the environment and species biodiversity are immense and seemingly endless. Whether the conseguences of climate change, human-caused problems such as deforestation, rapid habitat loss, wildlife exploitation, or military conflicts, among others, we seem to be in a constant war to combat these challenges. The contrasting state is peace and the emergence of harmony, characterised by the fact that all species can exist in the absence of such pressures and all contribute to a healthy earth.

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Exhibit "War and Peace"

Luis likes to make sculptures using bare welding rods with other materials incorporated with them in the design. This is shown in the "War and Peace" sculpture where he has incorporated recyclable materials. The green leaves are made from recycled glass beer bottles and the gun from recycled scrap metal.

The left hand side of the sculpture represents "Peace" and the right hand side "War".

The red line between the part of peace and the part of war made with red glass, symbolises the blood that is shed in the transition from life to death.

Dimensions of Exhibit

120 cm high x 60 cm wide

War and Peace
Luis Huertas Tamayo

Mike van Dam *(Australia)*

Artist and Stainless Steel Welder Mike (Michael) van Dam was born in New Zealand and lives in Queensland, Australia, with his wife and two children and is a world-renowned stainless-steel sculptor.

Mike is an award-winning and internationally recognized artist who has a strong background in creating iconic and important sculptures that have been placed all over the world and have attracted various prestigious artistic awards. Mike's sculptures have been placed in central iconic locations such as Sydney Harbour, Hayman Island, Israel and Greece.

Mike creates highly aesthetic artwork and has been mentioned as "one of the most innovative and eminent contemporary realist and hyper-realist international artists" by the Rarity Gallery, Mykonos, Greece.

His extremely strong and durable sculptures are made from marine grade stainless steel chain. His sculptures, which take hundreds of hours to be created, are well equipped to face the rigours of outdoor display, particularly in coastal environments.

Many of his works can be found at marinas and other public spaces across Australia, including Sydney Harbour. His work is often sea or marine-life themed, which he attributes to his life-long love of being in and around water.

Van Dam, won the Swell Sculpture Festival Emerging Artist Award in 2013, and was a finalist in the 2014 Sculpture at Sawmillers exhibition in Sydney.

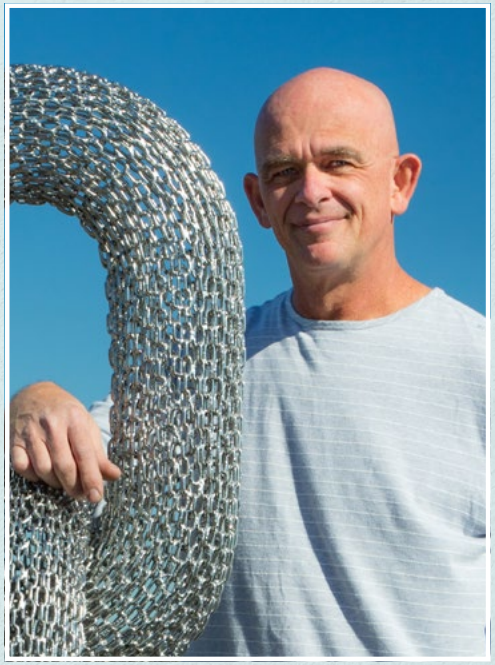

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Exhibit "Dolphin"

The exhibit is made from approximately 500 metres of 4mm 316 stainless steel chain.

Each link has four welds made by Gas Tungsten Arc Welding (GTAW) and are easy to clean and blend in well with the links.

Dimensions of Exhibit

1.2m high x 1.1m wide x 0.7m deep

Exhibit: "Seahorse"

The exhibit is made from approximately 800 metres of 4mm 316 stainless steel chain.

Each link has four welds made by Gas Tungsten Arc Welding (GTAW) and are easy to clean and blend in well with the links.

Dimensions of Exhibit

2.0 m high x 1.1 m wide x 0.4 m deep

Dolphin
Mike van Dam

Seahorse
Mike van Dam

Ian Lowe *(Canada)*

Ian Lowe (Lowe Tide Design) is a Coast Salish metal sculptor based on Vancouver Island, British Columbia, Canada. With over 30 years of experience in welding and fabrication, he transitioned from senior management at one of British Columbia's largest steel fabrication and welding manufacturers to a full-time artist. His work is inspired by the biodiversity of the West Coast, capturing the delicate balance between wildlife, land, and ocean in stainless steel, often incorporating wood and stone.

Ian's work is a tribute to the interconnectedness of species and habitats, highlighting the resilience and beauty of the natural world and beyond. Hand-collecting materials from the very environment he lives in and transforming them into works of art creates a deep and tangible connection to the biodiversity his region sustains.

His art is a translation of the environment that surrounds him. The energy he receives from nature produces a desire for him to create and share his interpretations with others. Many of his sculptures intertwine mediums such as wood, rock and steel. Combining the natural elements allows him to feel connected to his subject collecting these pieces is part of the process.

Many years of welding and hand forging steel has unravelled into what one sees in his art today, limitless expression of multiple mediums. His processes include plasma arc cutting, Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW), oxy-fuel heating, hand forging, buffing, and mirror-polished accents.

Sharing has always been a very important part of who he is as a person and art has gifted him this ability. Gratitude for art has many layers.

Contact info

Artwork Archive: Art by Ian Lowe | Artwork Archive

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Exhibit “Seafood Montage”

Vancouver Island is renowned for its fishing industry. This montage shows three examples of marine life which make a significant contribution to the success of the industry.

The two ocean-inspired sculptures, a dynamic salmon and a striking crab, are handcrafted entirely from stainless steel using a combination of plasma cutting, Gas Tungsten Arc Welding (GTAW) and Shielded Metal Arc Welding (SMAW).

Each form was forged by hand, then heat-treated for patina, buffed and polished to enhance their natural brilliance. Rooted in a deep personal connection to the ocean, both pieces reflect a harmonious blend of technical precision and reverence for life.

Dimensions of Exhibit

The Spot Prawn, The Knight of Saanich Inlet, 100% hand forged and welded stainless steel, 42 in long, 8.0 in wide, 25.25 in high, weight 46 lbs.

The Dungeness Crab, The Guardian, 100% AISI 304 Stainless Steel, 11.25 in long, 12.00 in wide, 3.75 in high, weight 9 lbs

The Chinook Salmon, The Knight of Georgia Strait, 100% Handcrafted, AISI 304 Stainless Steel, wall mounted, 35in long, 2.0 in wide, 33.5 in high, weight 30lbs.

Exhibit “Colossal the Giant Squid”

Giant Squids are the largest of all the living cephalopods and the largest individual invertebrate in the world. There is still little known of the identity, distributions, biology and behaviour of giant squids. Two thirds of the length of these squids is made up by a pair of long feeding tentacles each bearing an elongate club on the tip. These metre-long tips bear large suckers armed with toothed horny rings.

Dimensions of Exhibit

18.5 in long, 6.5 in wide, 14.25 in high, welght 22.5 lbs.

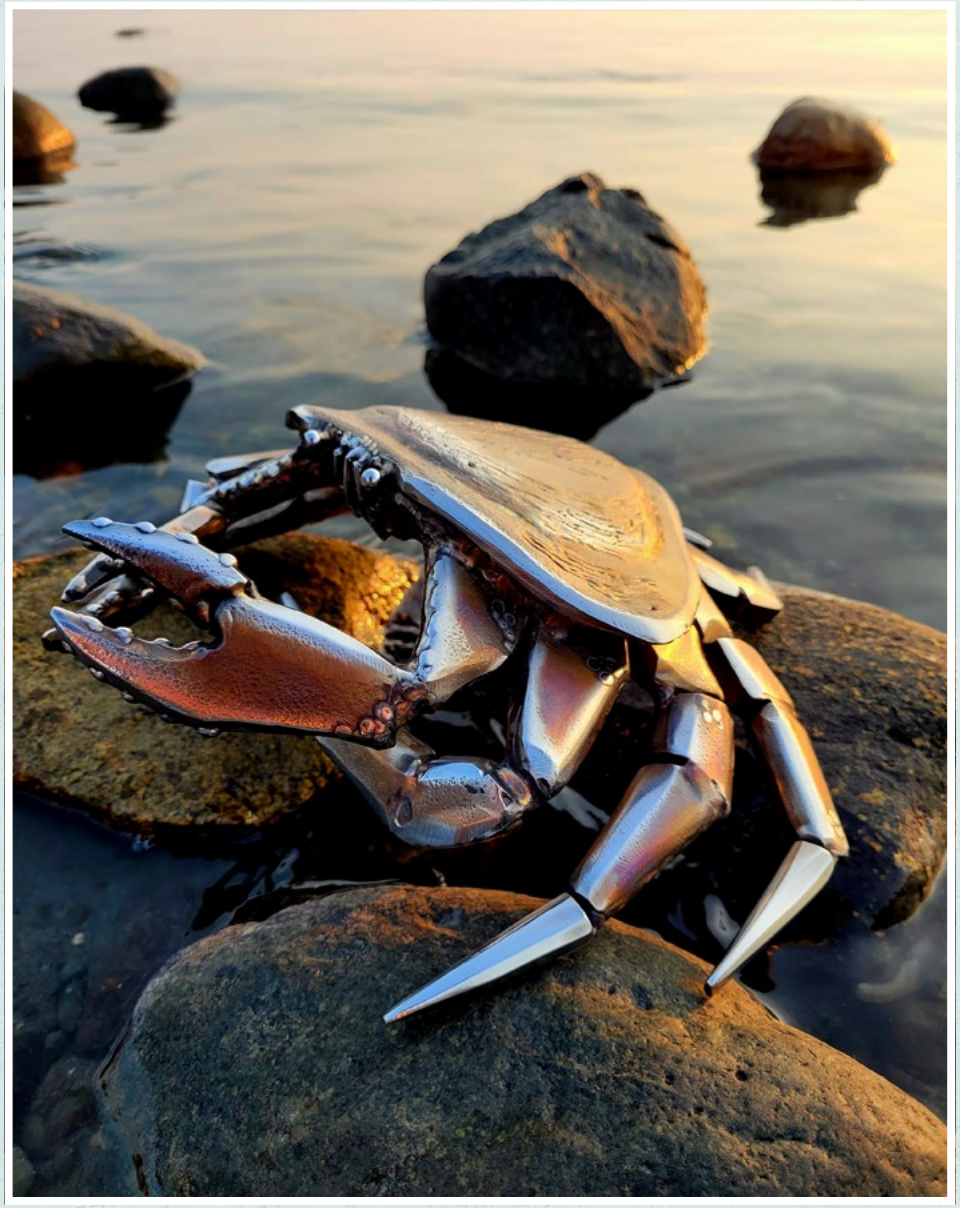
Exhibit “Eternity”

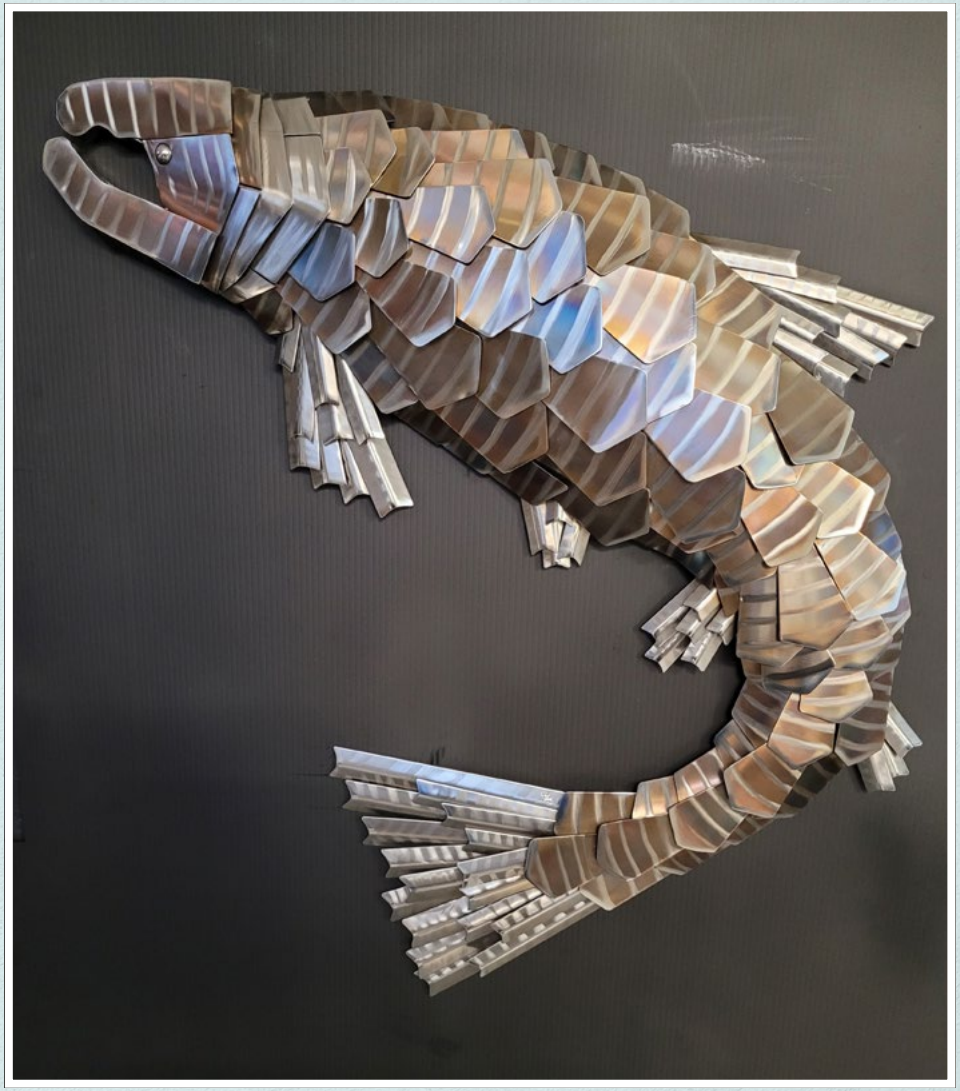
Eternity is a sculpture honouring the bald eagle. The biodiversity of the Bald Eagles on Vancouver Island is currently threatened by deforestation, shoreline development and pesticides accumulated through the food chain. Ian’s eagle sculpture Eternity is 100% hand forged and welded stainless steel mounted in a stainless steel tree with 3/8in thick stainless steel round base plate and a concrete slab.

Dimensions of Exhibit

Each eagle 91.60 cm high, the tree 182.88 cm high.

Seafood Montage
The Spot Prawn
Ian Lowe





Seafood Montage
The Dungeness Crab and The Chinook Salmon
Ian Lowe

Colossal the Giant Squid
Ian Lowe

Eternity
Ian Lowe

Ann Gildner *(USA)*

Although an artist for over 40 years, Ann Gildner only began welding twelve years ago and particularly likes to create large public and private art. Her Gildner Gallery Studio allows her to create large scale metal sculptures from 2 to 40 plus feet high in the welding school her studio is in at Industrial Arts Institute, Onaway, Michigan.

Ann gives great lifelong learning opportunities to people ranging from 8 to 88 years old. These include welding camps, ornamental welding and CNC Plasma cutting classes to encourage people into welding and welded art careers as an Artist-in-Residence throughout Michigan.

Ann has created many commissions to show viewers a close-up image of animals in their natural habitat. This way people can explore their beauty; see the size they are and touch them, and of course, get a picture with them!

Biodiversity in Michigan and the Great Lakes is of major significance.

The North American Great Lakes are the world's largest freshwater ecosystem. Both in and around them are irreplaceable biological features like coastal plants and animals, deep-water fish, and the world's largest system of freshwater dunes.

In Michigan, groups are collaborating to protect the state's biodiversity. This work comes in many forms, including the preservation, restoration and reconnection of valuable habitats in Michigan and across the Great Lakes.

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Exhibit “Fish”

When Ann was asked to make a relief sculpture to represent the fishing industry of Northern Michigan, she began by taking a hike to the Ocqueoc Falls, the largest waterfall in Michigan’s Lower Peninsula and the nation’s first universally accessible waterfall.

On a hike along the Ocqueoc River, as you walk along the cool, quiet path, you pause to watch a blue-spotted salamander slink along the forest floor. Further down the trail you hear the call of a black-throated green warbler as they dart through the thick trees. Nearing the waterfall, you see on the water’s edge a White-Tailed deer ambling along. You stop to investigate the river that is so crystal clear and see some rainbow trout swimming by. On your sleeve a dragonfly takes a rest. This walk gave Ann the vision to create her fisheries sculpture that is exhibited on a local 6-foot-tall limestone rock.

This is biodiversity. All around you, from the lichen covering a nearby rock to the insect buzzing past your ear, organisms are interacting. Including you! This variety of life, the communities they form, and habitats in which they live make up life as we know it.

So Ann made a scene of Rainbow Trout jumping while catching a dragonfly on a cattail leaf coming out of the water. In the water you see a school of Yellow Perch, with Bluegills and Sunfish swimming by a fallen tree stump. On the riverbed you will see different rocks and plants.

Dimensions of Exhibit

180 cm high x 130 cm wide x 25 cm deep.

Fish
Ann Gildner

Exhibit “Red Cardinals in a Dogwood”

In this Commission, Cardinals were once prized as pets due to their bright colour and distinctive song but now in the United States, this species is protected under the Migratory Bird Treaty Act of 1918, which also banned their sale as cage birds. It is illegal to take, kill, or possess northern cardinals, and violation of the law is punishable by a fine of up to US$15,000 and imprisonment of up to six months.It is also protected by the Convention for the Protection of Migratory Birds in Canada.

Red Cardinals are common to see in Northern Michigan and are enjoyed because of their colour. This commissioned sculpture of a male and female Red Cardinal was to their exact size to be mounted in a local art park for people to see up close. It is a reproduction of a local bird in the area.

Red Cardinals in a Dogwood
Ann Gildner

The steel bodies are welded with a MIG welder which Ann uses as a sculpting tool. The feathers were cut out on a CNC plasma machine for the exact size of the different feather shapes and sizes. The tree and limbs are made with steel that has be MIG welded, and hand gouged with Carbon Arc Gouging to make texture in the metal.

The red cardinals are perched in a dogwood tree which is one of the first trees that blossom in the spring. The dogwood blossoms are made in stainless steel.

Dimensions of Exhibit

Cardinals are 10” height for the male and 8” height for the female. They are perched on a 3-foot-long branch with 1” to 2.5” dogwood blossoms. The trunk is made of steel, 4 foot in height x 16” dia.

Georgie Seccull *(Australia)*

Georgie Seccull is a sculptor and installation artist based in Melbourne, Australia. She creates large-scale stainless steel sculptures of animals and other creatures seemingly locked in motion. Composed of numerous pieces cut from metal sheets, the materials lend themselves to organic forms like feathers, scales, wings, or the armaments of crustaceans.

As a self-taught artist she began her journey making sculptures out of reclaimed materials; using scrap metal from recycling yards, off-cuts from production lines and things found in the natural world. She quickly became increasingly inspired by the way her sculptures seemingly appeared to generate a feeling of life-force and movement as she wove the organic shapes of material together.

Georgie's work can be found in private collections and public spaces throughout Australia and has been exhibited in the National Gallery of Victoria as well as being recognised with multiple awards.

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Exhibit "Gatekeeper"

Lyrebirds have always felt incredibly mysterious and majestic to Georgie with their endless repertoire of mimicking sounds. She thinks of them fondly as the gatekeepers of the forests they inhabit. They are the record keepers of all the comings and goings. Unfortunately all too often that includes their mimicking sound of a chainsaw, highlighting the very real threat they are under of deforestation.

Georgie uses AISI 304 stainless steel sheets ranging from 0.5mm - 1mm in thickness and AISI 304 stainless rods ranging from 3mm - 10mm in thickness. Firstly, she creates the skeleton of the piece with the rods. She paints the metal sheets with various metallic spray paints creating a hue of subtle colour variations - greys, charcoals, golds. She then cuts the sheets using a plasma cutter. She scatters the individual pieces on the floor and then works them like a jigsaw puzzle to weave them onto the skeleton frame to create the sculpture. Each time she selects a shape of sheet metal from the floor, she smooths the edges with a bench grinder and various air-tool grinders and then shapes it using an English wheel. She uses Gas Metal Arc Welding (GMAW) with stainless steel wire and pure argon gas to weld the sheet metal to the framework. She then finishes the piece with a matt gloss spray finish to hold the colour.

Dimensions of Exhibit

150 cm high x 110 cm long x 90 cm wide

Gatekeeper
Georgie Seccull

Zavaczki Walter-Levente *(Romania)*

Zavaczki Walter-Levente, is a sculptor based in Székelyudvarhely, Romania. He was born on October 24, 1975, in Felsővisó, Romania. He graduated from the University of Fine Arts in Oradea, majoring in Sculpture (1997-2002). His artistic practice focuses primarily on large-scale public sculptures, working mainly with welded metal. His themes explore the connection between humans and nature, the use of ancient symbols, and the fusion of contemporary and traditional forms.

The eagle for example, is not only a symbol of strength and identity, but also a key species in many ecosystems. In recent decades, the habitat of certain eagle species has decreased, though conservation efforts have shown promising results. This sculpture draws attention to the importance of preserving biodiversity and directly relates to the United Nations Sustainable Development Goals 14 and 15. His artistic goal is to inspire thought and action through form, material, and message.

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Exhibit “Steel and Zinc Eagle”

The Steel and Zinc Eagle is a monumental sculpture made of welded steel, using recycled and galvanised steel. It was created with technical precision and strong symbolic expression. The sculpture stands in front of a church in the town of Battonya, Hungary, as part of a memorial monument.

The eagle is a recurring motif in Walter-Levente’s artistic work, representing strength, vision, and the human–nature relationship. The sculpture refers to the biodiversity of mountainous regions, where birds of prey play a crucial ecological role. By reusing industrial materials, Walter-Levente’s aim is to emphasize sustainability and environmental awareness. The sharp lines and dynamic form of the sculpture capture the spirit of freedom and vitality.

He uses various cutting and welding methods depending on which is more efficient for the given task. For straight cuts, he prefers manual guillotine shears, for curved shapes, plasma or electric sheet cutters, and for large sheets he uses an angle grinder. As for welding, he uses MIG/MAG, TIG/WIG, MMA, and occasionally oxy-acetylene, based on the required surface finish or strength. The feathers were cut with a guillotine, tack welded with MAG, and then fully welded. For the legs and head he used MMA welding. Surface treatments, softening or smoothing were often done with an oxy-acetylene torch.

Dimensions of Exhibit

The wingspan is three metres with a height and length of two metres.

Steel and Zinc Eagle
Zavaczki Walter-Levente

Rodrigo Spinelli *(Spain)*

Rodrigo Spinelli is an Italo-Brazilian artist specializing in steel sculpture and drawing, with a studio in Tallada d'Empordà, Catalonia. He studied with Pablo Bruera and at institutions such as the Royal Academy of Arts and Florence Academy of Arts. Rodrigo's welded art merges traditional techniques with contemporary vision, exploring geometry, transformation, and elegance. His work is dedicated to defending nature and diversity, earning international recognition, including the 2022 Reial Cercle Artístic de Barcelona Sculpture Prize for "Gordelícia." He has pieces in Spain, France, Brazil, the UK, and Italy.

His work explores the intrinsic connection between humanity and nature, using sculpture as a tool for environmental advocacy. By highlighting the resilience, diversity, and vulnerability of natural forms, he aims to foster awareness and respect for ecosystems. This aligns directly with the UN Sustainable Development Goals 14 (Life Below Water) and 15 (Life on Land), as his pieces encourage reflection on the urgent need to protect biodiversity.

He is a multidisciplinary artist who draws every day. Since 2024, he has been working on a series of pen drawings and steel sculptures inspired by the birds of Parc Natural dels Aiguamolls, Catalonia. Observing and drawing local birds led him to become a true bird lover and resulted in an invitation from the park to exhibit drawings and sculptures focused on Empordà's fauna.

He aims to use art as a tool to raise awareness and inspire the protection of biodiversity.

Ultimately, he seeks to inspire positive action and dialogue, promoting creative responsibility for our planet's well-being and a more just, sustainable future for all species.

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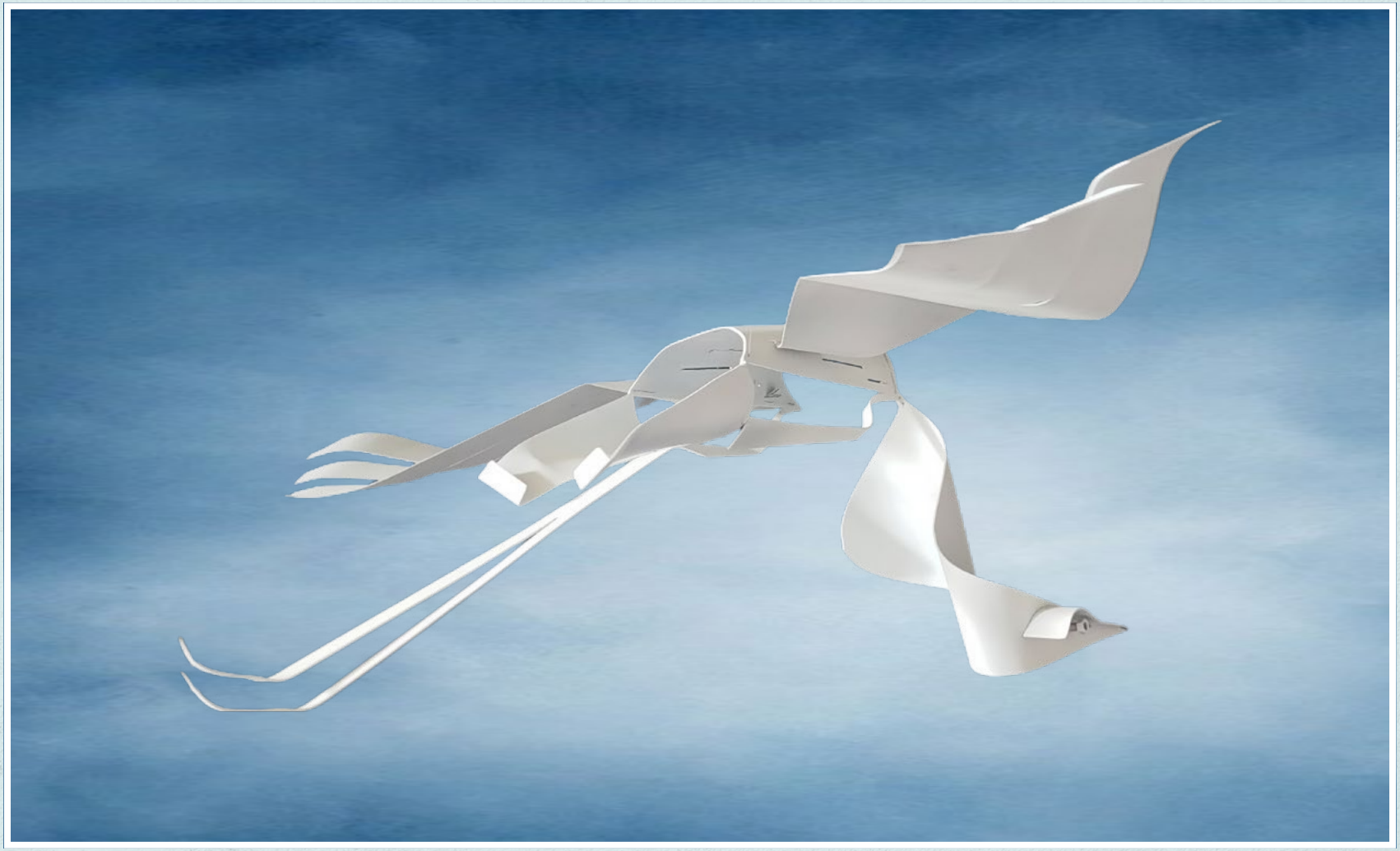
Exhibit "The Elegant Flight of the Heron"

The heron's flight, with its striking elegance, inspired Rodrigo to express, in metal, the duality between the material's weight and the lightness of flight, strength and the delicacy of the legs, and the unique poetic curve of the neck. For this work, he used 1.5 mm steel sheets, beginning with drawings on cardboard. The sheets are plasma-cut, shaped cold by hand or with simple tools, assembled with MIG-MAG welding, and finished with matte white spray.

An innovative feature is the body's multiple slots, allowing many wing configurations. It is designed to be suspended by almost invisible steel wires, so it captures the heron's graceful flight.

Dimensions of Exhibit

40 cm high x 90 cm long x 110 cm wide



The Elegant Flight of the Heron

Rodrigo Spinelli

Anna Frlan *(Canada)*

Anna was introduced to steel, welding and sculptural artwork in the Department of Fine Arts at the University of Ottawa in Canada. Upon graduation, she established a studio practice and has been creating welded steel sculptures for 25 years. She challenges herself to use welding in an innovative way, to build up forms and create textures, fabricating with steel sheets, rods, bars and tubes. She has learned that steel is inherently malleable and may be transformed into an infinite variety of sculptural forms representing the biodiversity of trees, nests and coral reefs.

For her exhibit, which was commissioned by the City of Ottawa and OC Transpo, Anna's objective in creating The Navigators (Bees, Birds and Butterflies) was to introduce natural references to the busy traffic corridor of Rideau Street in Ottawa. She created thirteen sculptures installed behind the glass walls of three bus shelters for this exhibit. Symbolic elements are water jet cut into stainless steel plate, comparing the intelligent navigational abilities of Ottawa's bees, birds and butterflies to the need for safe navigation of OC Transpo buses and passengers.

She researched the shapes of feathers and discovered that birds have special filoplumes which may help them to navigate and detect weather conditions such as temperature. The nine Bird feather sculptures are water jet cut with meteorological symbols for cloud cover, air fronts, precipitation and visibility. The Butterfly sculpture is surrounded by magnetic patterns, alluding to the theory that iron filings in the butterfly's abdomen help it to navigate the Earth.

The Bee sculpture depicts the flight path of the bee merged with the entire schedule for bus route #6. It is flanked on either side by bee's wings patterned with honeycombs, representing the bee's desire to return to the hive.

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Exhibit "The Navigators (Bees, Birds and Butterflies)"

Anna researched the biodiversity of bees, birds and butterflies in Ottawa and their inherent navigational abilities to create detailed drawings required for water jet cutting of The Navigators sculptures. 180 bird species nest locally in Ottawa and 80 are at risk. She selected feathers from 9 bird species to create the Bird sculptures. The meteorological symbols found on the sculptures illustrate the intelligence of filoplumes which enable birds to detect weather conditions and determine safe flight conditions.

Of the 94 butterfly species in Ottawa, the Monarch butterfly is one of the species at risk due to habitat loss and nectar sources such as milkweed.

The Navigators (Bees, Birds and Butterflies)
Anna Frlan
Photos: David Barbour

In the Butterfly sculpture, the space delineating the form of a butterfly is largely empty, alluding to the threat of extinction.

Wild bee species are also at risk in Ottawa. A recent study at the University of Ottawa revealed that 70% of ground-nesting bees are at risk because of exposure to pesticides in the soil.Bees memorize the shapes of bushes, trees and other elements in the landscape to know the way home after a trip for gathering pollen. The Bee flight path sculpture contains information about bus stop names and times for an entire bus route, forever cut into the welded stainless steel sculpture.

Dimensions of Exhibit

Comparison of each exhibit with size of bus shelter

The Navigators (Bees, Birds and Butterflies)
Anna Frlan
Photos: David Barbour

The Navigators (Bees, Birds and Butterflies)
Anna Frlan
Photos: David Barbour

Richard Moffatt *(Australia)*

Richard Moffatt has spent his life working with metal. As a qualified artisan welder, he has been employed on many major welding projects during his career, particularly involving high quality pressure pipework on power stations, petrochemical plants and in the mining industry. His sculptural career began 20 years ago, and as an award winning artist, he now resides and works near Bega on the far south coast of New South Wales, Australia.

As he states “Sculpture is my work. I love the time in my workshop and am continually excited and inspired by endless possibilities and ideas that flow. There is an intimate relationship between artist and material, an intuitive feeling, a touching of boundaries that can then be expanded”.

Among his range of sculptures, trees have always held a fascination for him. A tree is a living entity giving shelter and support to its community. At a glance it is a single form but with contemplation one discovers a thriving community within its canopy.

Richard’s sculptures have been collected extensively, both privately and by numerous public institutions nationwide. The Healing Tree destined to stand outside the Houses of Parliament in Canberra is a good example as well as his Eagle and Nest at the National Arboretum, Canberra. The Healing Tree is a national memorial apologising to survivors and victims of child sexual abuse.

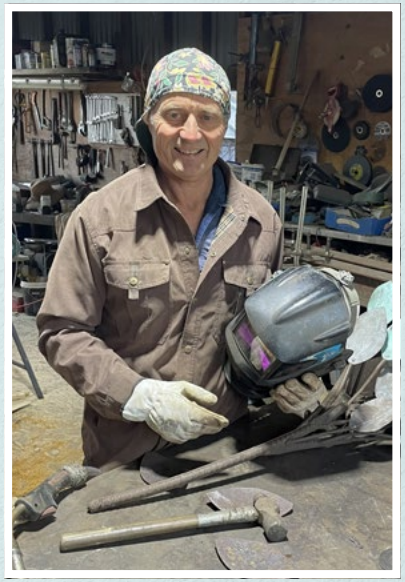

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Exhibit “The Davar Giving Tree”

The Davar Giving Tree represents caring and support at its core. It was gifted by the Davar Family to the Sydney Adventist Hospital (SAN) as a symbol of everlasting generosity and recognition.

The Tree has been sculpted from steel and copper, rising from a wide base, as if growing from the floor. As Richard Moffat said, the Tree is a metaphor for the hospital, made from the same skeletal material as the building. It is an eye-catching hand forged structure, with roots, a gnarled trunk, and hundreds of hammered light-reflecting leaves.

Now installed in a foyer opposite the main reception area at the hospital, the leaves can be engraved with details of future donors.

Dimensions of Exhibit

240 cm high x 360 cm wide x 80 cm dia base

The Davar Giving Tree
Richard Moffatt

Hilary Clark Cole *(Canada)*

Canadian sculptor Hilary Clark Cole was born in Victoria, British Columbia and is a graduate of the Ontario College of Art and Design. She has lived and worked in Muskoka since 1971.

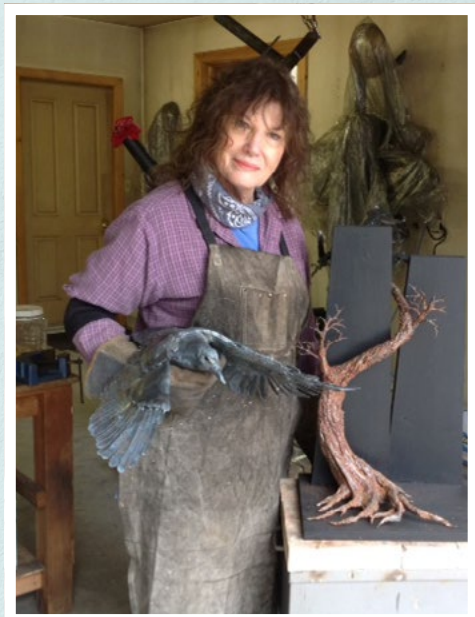
As well as having her metal sculptures in many private collections, she has created significant public sculptures over the years. Her works have featured in all previous IIW welded art photographic exhibitions.

She has won many awards for her sculptures, and she has been profiled on television programmes on the Life Channel, CBC and Global. She is a strong role model in the community and in 2002 won the first YWCA Woman of Distinction Award for Arts and Culture.

Hilary works mainly in hand-built welded steel artwork, which can be very small or very large, rough or smooth, monochromatic or colourful. In particular, they often reflect the importance of biodiversity related to her home country.

Her work has been described as “In the world of welding women, her creative spirit has no equal…..Lyrical and beautiful, infused with joy and humour, hard cold steel comes alive”

Hilary’s love of birds and love of steel is evident in her sculptures. She has found that certain birds lend themselves perfectly to the medium of steel, such as ‘The Crow’ and the ‘Common Uncommon Raven’. But this first exhibit “Tree Swallow and Young” was like making a piece of jewellery.



When she is building a large lifesize piece such as the “Grizzly Bears, Mother and Cubs”, she does a great deal of research and then creates a small version of welded steel which incorporates all that acquired information as well as the stance of the sculpture and the detail. She then has the maquette by her side as she works on the large one for measurements and for inspiration. This large sculpture took one year to complete.

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Exhibit “Tree Swallow and Young”

The focus of the piece is two little open-mouthed babies in the notch of the tree, competing for the dragonfly in their mother’s mouth.

Although the Tree Swallow was an extremely difficult challenge in this material, Hilary was determined to recreate the spirit of a delicate aerial acrobat, moving, not still. She knew that the steel, if handled properly, would allow her to interpret this subject.

The body of the mother bird is of steel rod, using a ‘drip’ technique to build up a surface, and then grinding down by hand to perfect the form, a lot of trial and error, but the only way to do it, although it took a long time to get it right.

She would wistfully leave her at night and come out the next day and know that she was still not ready for her wings. But, finally, the wings! Thin thin shards of steel feathers, cut to shape, welded with a tiny .02 tip, and then hammered, engraved, and torch coloured.

The nesting tree is made from sheets of steel sheet and plate. She distressed the steel and rusted it to give it a different texture and colour.

Dimensions of Exhibit

Lifesize

Tree Swallow and Young
Hilary Clark Cole

Exhibit “Grizzly Bears, Mother and Cubs”

The Grizzly Bears, Mother and Cubs, is a tribute to the place in Canada where Hilary was born, British Columbia.

It is a female grizzly, who is sensing danger, and has pushed her cubs to her flank, fiercely protecting them.

This sculpture is created of 1/8th inch Corten Steel plate, a steel alloy which rusts to a beautiful grizzly brown, but does not continue to corrode further.

In order to give this sculpture a true, ‘grizzled’ appearance, Hilary chose to cut the steel plate into individual hairs (a rough calculation suggests that she cut 40,000 pieces), and welded them, one at a time, to the skeletal frame of the bear. In the foreground of other photos on her website of her working on this sculpture, you can see the ‘maquette’, or model.

The exhibit is installed at ‘The Colonial, Hwy 12 and Manning Road, Whitby, Ontario”, and is accessible to the public.

Dimensions of Exhibit

Lifesize

Grizzly Bears, Mother and Cubs
Hilary Clark Cole

Grizzly Bears, Mother and Cubs
Hilary Clark Cole

Ricard Mira *(Spain)*

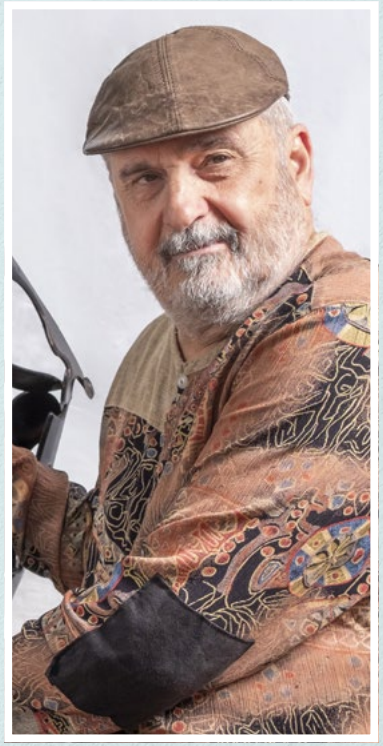
Ricard Mira was born in 1952. He learned to weld while working at the Derbi motorcycle company where, later on, he became a fitter for the motorcycles which won the World Championship repeatedly.

Ricard has had an illustrious career over more than four decades and was named a Master Sculptor by the Government of Catalonia in 2014. He is a member of ICRE <https://icre.cat/> (Catalan Institute for Research in Sculpture). He has recently released a book on his past 40 years in sculpting, which can be downloaded here: <https://ricardmira.eu/llibre>

Although he also uses other metals (such as stainless steel, corten, copper, brass and aluminium), Ricard makes most of his sculptures by recycling iron scrap from the metalworking industry at Martorelles (near Barcelona, Catalonia), where he lives and works. He imparts this recycling message to students during their visits to his workshop.

The Iberian Lynx, which Ricard has chosen for his exhibit, has suffered major decline in the past due to poaching, habitat loss, fluctuations in the rabbit population (its food), road kill and diseases from domestic cats. A major collaborative effort has taken place with the support of many organisations and the European Union LIFE Project to reintroduce the lynx in Spain and Portugal including restoring its habitat.

The conservation status of the Iberian lynx (Lynx pardinus) has improved from Endangered to Vulnerable, with the population increasing exponentially from 62 mature individuals in 2001 to 648 in 2022. Today, the total population, including young and mature lynx, is estimated to be more than 2,000 and occupies an area of at least 3,320 Km2.



Contact info

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Exhibit “Hopeful Lynx”

The exhibit is the head of a male Iberian lynx made with welded steel and inox in Ricard’s style, which he calls cold forging. It combines fullness and emptiness, as usual in his human representations. The sculpture is finished with graphite.

Dimensions of Exhibit

22 cm high x 10 cm wide x 26 cm deep

Hopeful Lynx
Ricard Mira

Vinit Barot *(India)*

A railway station is often the first impression a visitor forms about a city — it is the face of the place, a reflection of its identity. In that spirit, Vadodara Railway Station has emerged as a true symbol of the city's rich cultural heritage and artistic vibrancy.

Celebrated as the cultural capital of Gujarat, Vadodara now proudly hosts a railway station that is unlike any other in India — where art meets innovation. In a remarkable collaboration between the Vadodara Division of Indian Railways, local artists, and visionary architects, the station has been transformed into an inspiring space featuring captivating sculptures, creative and comfortable furniture, and immersive 3D paintings. What sets this transformation apart is its sustainable approach — the sculptures and artistic furniture have been crafted from upcycled railway scrap, turning discarded materials into masterpieces. This project is a shining example of how sustainability and aesthetics can coexist in public spaces.

Flowing through Vadodara is the iconic Vishwamitri River, which adds a natural charm to the city's landscape. The river is home to a thriving population of Mugger Crocodiles, making Vadodara one of the few cities in the world known for its harmonious relationship with these magnificent reptiles. This unique ecological identity is beautifully reflected & displayed as a sculpture "Croc Mother & Child" at the station, reinforcing the city's deep-rooted connection with nature.

Contact info

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Exhibit "Croc Mother and Child"

This sculpture has been installed near the middle entry gate towards the Enquiry Counter at the Vadodora Railway Station. A special platform has been created for the exhibit so citizens can click "Selfies" with it. One idea of this sculpture is to sensitize people about caring for their living Heritage- the crocodiles in the region.

The exhibit is of a Sweet Water Crocodile which refers to the Mugger Crocodile (Crocodylus palustris), also known as the Marsh Crocodile. This species is a medium-sized, broad-snouted crocodile found in various freshwater habitats, including rivers, lakes, marshes, and even coastal areas. The male is generally between 3 to 4 metres long and female 2 to 3 metres long.

For a sculpture of this size, it is important that an accurate armature is made to assist with both supporting the sculpture as it is being made but also to ensure correct form and shape of the crocodile is achieved.

Dimensions of Exhibit

4.0 m long x 1.3 m wide x 0.5m high

Croc Mother and Child
Vinit Barot

Hobby Artists

Welded art as a hobby can be a regular activity that is done for enjoyment, typically during one's leisure time. Examples in the IIW 2025 Digital Collection can be seen showcasing casual, serious and project based leisure including hobbyists obtaining commissions and selling their sculptures.

There are very good examples of people starting as hobby artists and as their competencies and experiences grow, opportunities arise which enable them to move into a full time role as a career artist.

Four hobby artists have exhibited:

1 . **Courtney Chard (Canada), Exhibits: Inner Balance, The Guardian, Into the Blue.**
Courney has a full time job as a pipe welder with MultiTech Trades Corp in Ontario and works part-time with her welded art. She was featured in the CWB WELD Fall 2024 Magazine. To mark the beginning of the CWB Group, EWI and CWB Foundation's new 10 year vision, Courtney was commissioned to design and create two identical commemorative sculptures, one for display at CWB headquarters in Milton Ontario and the other at EWI in Columbus, Ohio.

2. **Andrey Makhorin (Kazakhstan), Exhibit: Grass Snake.**
Andrey is a professional welder and the more he learns about nature and the environment and the need to protect and improve them, he uses his welded art to highlight challenges we increasingly face. In 2023, he showcased his exhibit "Starry Sturgeon", and in 2024, "Poison Dart Frog", highlighting the challenges these face being classified as endangered to critically endangered by the International Union for Conservation of Nature (IUCN).

3. **Sergey Minakov (Ukraine), Exhibit: Biodiversity of My Region.**
Sergey is Associate Professor in the Welding Department of the National Technical University of Ukraine, Igor Sikorsky Kyiv Polytechnic Institute. Sergey has creatively combined both his professional activity in welding and his hobby of welded art and photography. Sergey held a very successful exhibition "Sensual Metal" from 17th July to 6th August 2023 at the Institute.

3. **Emily Stewart (USA), Exhibit: Forged in Silence: Wings of Change.**
Emily's passion for welding and metal art has allowed her the opportunity to teach women how to weld at different events around the country. Every year in November, Emily travels to Lucky Star Art Camp in Hunt, Texas, to teach the women who join for camp how to weld. Each student has the chance to make a metal rose in her 'Intro to Welding' class, and design and create their own sculpture in her 'Welding Sculpture' class.

Courtney Chard *(Canada)*

Courtney is a licensed Steamfitter and Pipe welder by trade. She received extensive formal training via Mohawk College and an apprenticeship at United Association (UA) Local 46 in Toronto. UA Local 46 has one of the most sophisticated training facilities and apprenticeship training programs in Canada. She has worked in the industry since 2002 and excelled in her career in positions including instructor and forewoman.

She has always been artistic and took the knowledge and skills from her trade and learned how to create welded sculpture from metal. Courtney mostly works with carbon steel, stainless steel and occasionally copper – and a wide array of tools.

When it's possible she takes scrap and reuses it in her sculptures. She likes to mix materials and anchor the pieces in rock. She wants to be connected to nature and its powerful elements. As she says, "The world is delicate and humans have caused so much damage to the world. The oceans and water give and support life. The animals that live there have thrived despite the destruction caused by us. These inhabitants of the water can live for 50 years or more and have knowledge that we cannot grasp".

Her three exhibits here feature a whale, a turtle and koi fish.

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Exhibits

Courtney likes to give the illusion of movement to her art and achieve this effect by supporting the metal in a way that it looks to be floating (swimming).

Firstly, she cuts the metal, often into intricate shapes, using a plasma cutter. To heat or bend thin metal, she grabs her oxygen acetylene torch. To bend thicker round or square stock metal, such as railway spikes, she heats them in her small forge and hammers it out when red-hot. To fuse two pieces of metal together, she reaches for one of three types of specialty welding machines. After she has layered and welded metal pieces to meet her overall vision, she wields an angle grinder to cut, sand down or grind off excess metal, as well as to polish.

The koi fish carbon and stainless steel sculpture, required a 3D wire frame outline onto which the various metal pieces were placed and held together by the welds.

For finishes, Courtney eschews paint in favour of more natural patinas and oils. For the pair of koi fish, motor oil helped achieve a darker colour on the carbon steel of one fish in contrast to the lighter stainless steel of the second; the sculpture represents yin and yang.

Vinegar, salt and hydrogen peroxide help rust metal as with the shell of the Turtle exhibit and a blowtorch creates spectacular blue and purple effects on stainless steel.

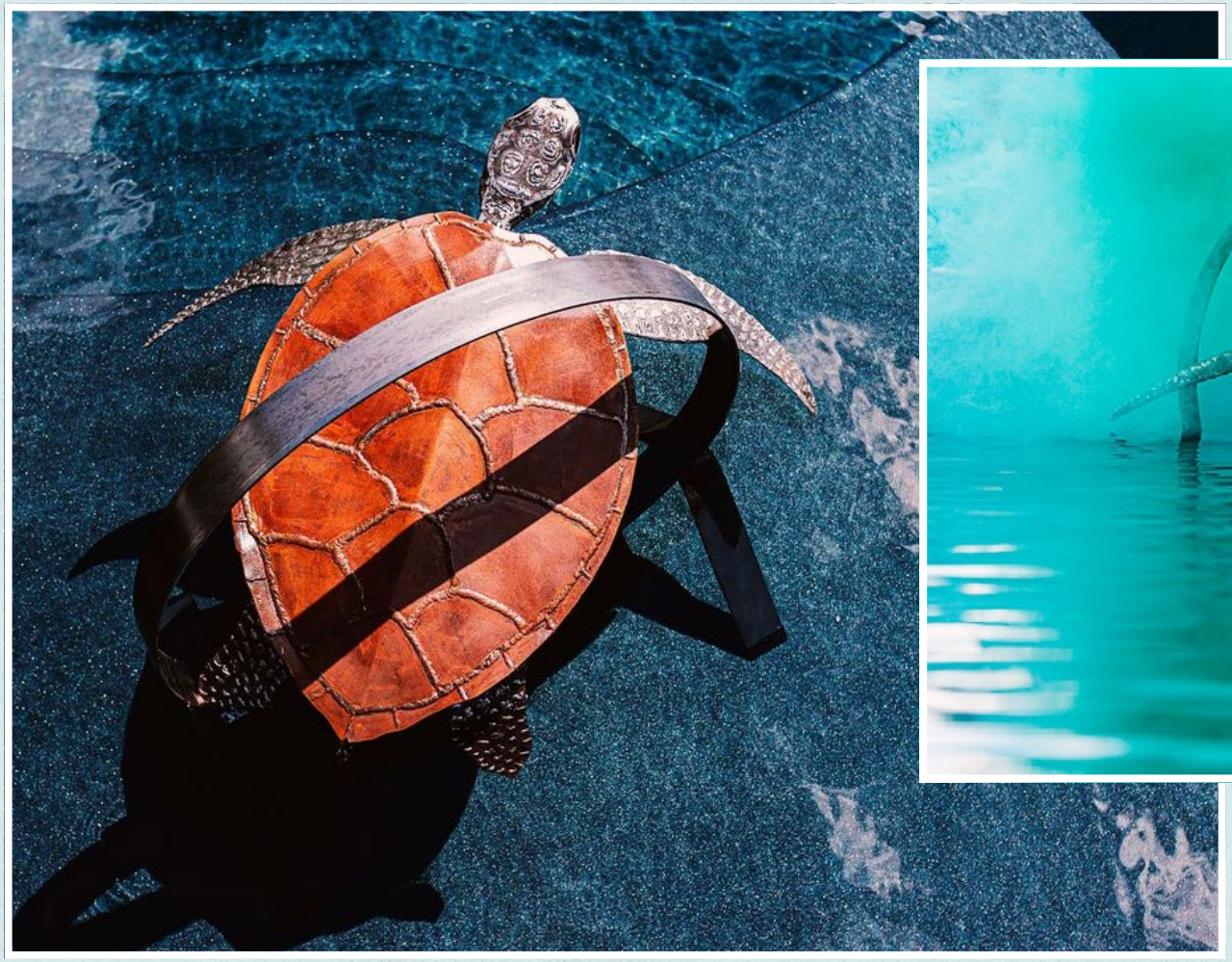
The final step is oil or a clear coat to preserve the finish.

Exhibit “Inner Balance”

Dimensions of Exhibit

107 cm high x 102 cm long x 102 cm wide

Inner Balance
Courtney Chard



The Guardian
Courtney Chard

Exhibit “The Guardian”

Dimensions of Exhibit

86 cm high x 76 cm long x 73 cm wide

Exhibit “Into the Blue”

Dimensions of Exhibit

61 cm high x 51 cm long x 38 cm wide

Into the Blue
Courtney Chard

Andrey Makhorin *(Kazakhstan)*

Andrey is from Atyrau, western part of Kazakhstan. He was born on February 19, 1981. He is a professional welder and is very proud of it and has been working in the big company KazTransOil for more than 20 years.

Andrey likes drawing, music, fishing and sports. He began to be fond of welding at the age of 16 helping his uncle in the garage before going to the welding college and graduating with honours.

Andrey has taken part in many welding competitions such as “The Best in the Profession” and “Arc Cup” amongst others. He has received more than 20 winner certificates.

Knowing how to draw and weld, Andrey began to combine them together and began to make various crafts from scrap metal including electrode stubs. He likes working with metal very much, making his ideas come true. It’s very cool. He participated in the IIW 2021, 2023 and 2024 Digital Collections.

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Exhibit “Grass Snake”

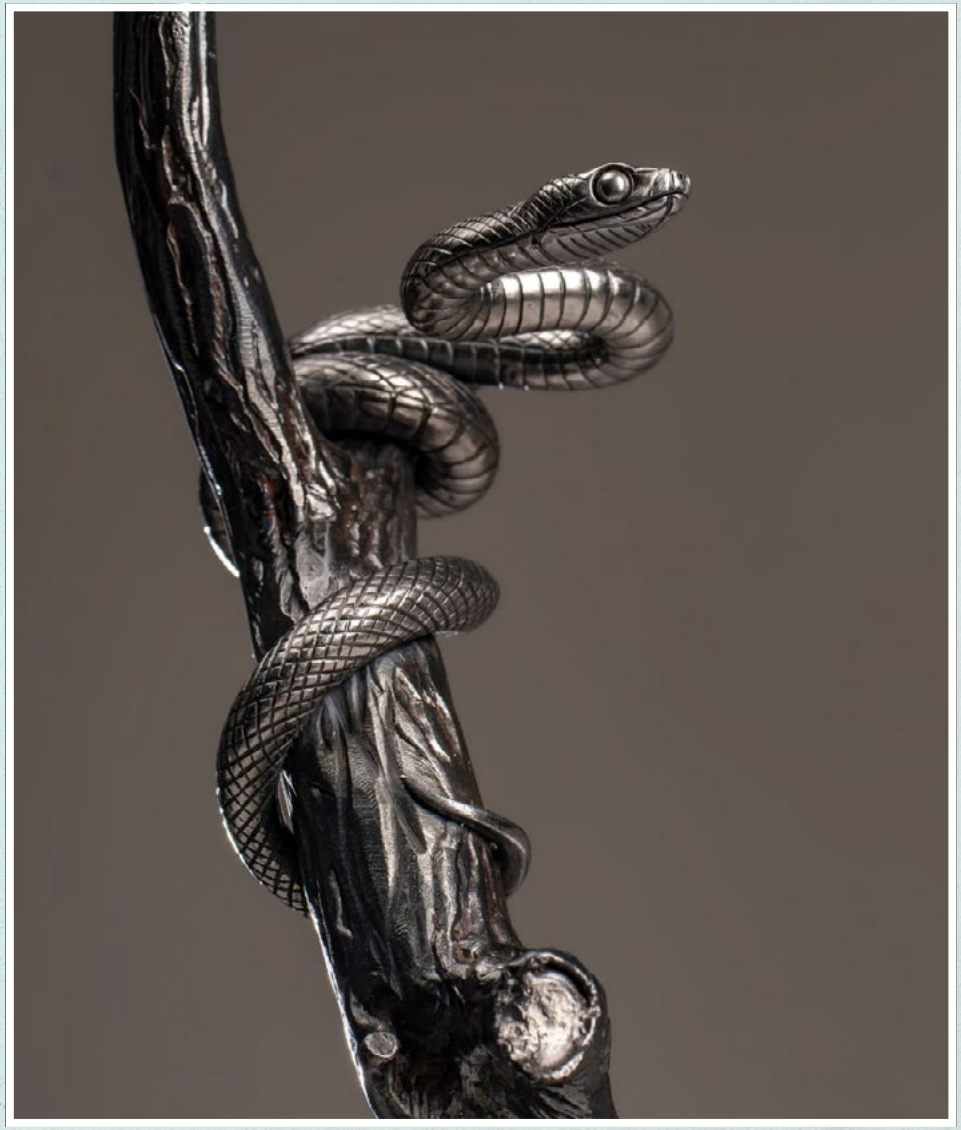
As he learns more about nature and the environment and the need to protect and improve them, he uses his welded art to highlight challenges we increasingly face. In 2023, he showcased his exhibit “Starry Sturgeon”, a critically endangered fish and in 2024, ”Poison Dart Frog” highlighting the challenges these frogs face with species being classified as endangered to critically endangered by the International Union for Conservation of Nature (IUCN).

The Grass Snake occupies a vast area from eastern Anatolia and eastern Poland and Finland through the Caucasus and the East European Plain, Southern Siberia and Kazakhstan to Lake Baikal and adjacent areas of Mongolia. As a rule, it is darker than snakes of other subspecies and has a uniform body colour. It is not venomous and rarely bites when captured or threatened.

This exhibit was made in Andrey’s garage using manual metal arc welding. He made the snake especially in honour of the year of the snake. It is made of 16mm diameter metal rolled reinforcement. The eyes of the snake are 5 mm diameter metal bearings. The branch of the tree was made from 25mm and 15mm diameter pipe. Welding was with manual metal arc welding 111. Patterns and details were put on using files.

Dimensions of Exhibit

30 cm high x 15 cm diameter



Grass Snake
Andrey Makhorin

Sergey Minakov *(Ukraine)*

Sergey Minakov is Associate Professor in the Welding Department of the National Technical University of Ukraine, Igor Sikorsky Kyiv Polytechnic Institute. Sergey has creatively combined both his professional activity in welding and his hobby of welded art and photography.

Sergey has always been fascinated by the opportunity to realise his creative plans and ideas into a real product. That is why he chose welding as his specialty, because it is the main technological process of forming an inseparable connection, and often even creating entire structures. Once, while welding a structure, he felt like a sculptor. This feeling sank into his soul.

The second significant line of his life is photography. He likes to spend his free time in nature and observe its inhabitants. This allows him to get away from the hustle and bustle of the big city and immerse himself in the real world of life on Earth, which has been going on for time immemorial.

The work “Biodiversity of My Region” reflects his feelings from observing the flora and fauna that have accumulated over time.

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Exhibit “Biodiversity of My Region”

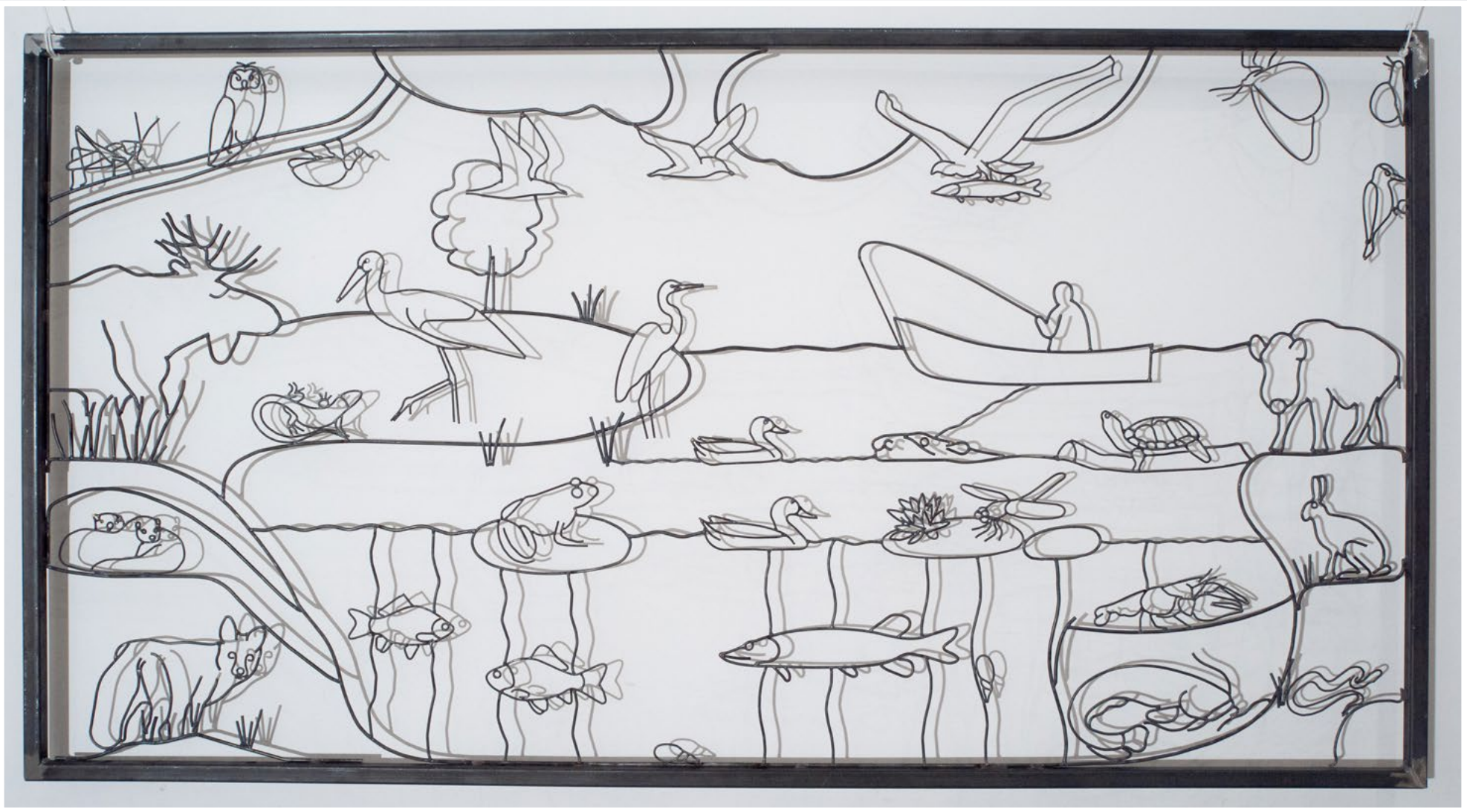
The welded sculpture Biodiversity of My Region shows the animal and plant world around the city of Kyiv, Ukraine. The main structural element of the sculpture is a supporting rectangle, which is a screen into the world of nature with unique flora and fauna. In this screen one can observe nature with animals, birds, insects, fish and reptiles. Each living creature is depicted in its corresponding environment: on (and in) the ground, on (and in) the water, in the air, on plants.

The construction material used was low carbon steel.
The following technologies were used in the production:

- computer processing of photos (adaptation of real photos into graphics);
- cold forging of figures (steel wire with diameters of 3, 4, 5 mm);
- mechanical cutting;
- TIG welding;
- TIG welding-brazing with CuSi3 solder;
- MAG welding.

Dimensions of Exhibit

0.99m high x 1.9m wide. Weight about 12 kg.



Biodiversity of My Region
Sergey Minakov

Click here for video

Emily Stewart *(USA)*

Originally from Central New York, Emily moved to South Dakota in 2018 to pursue a career in Diesel Technology where she found her passion for metal and welding.

Emily's passion for welding and metal art has allowed her the opportunity to teach women how to weld at different events around the country. Every year in November, Emily travels to Lucky Star Art Camp in Hunt, Texas, to teach the women who join for camp how to weld. Each student has the chance to make a metal rose in her 'Intro to Welding' class, and design and create their own sculpture in her 'Welding Sculpture' class. Her art has been on display in a few art shows over the past few years.

As a woman who worked in the male dominated industry of diesel technology, Emily is a proud advocate of women in male dominated industries. She aims to empower women to follow their dreams and support them to do whatever inspires them.

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Exhibit "Forged in Silence: Wings of Change"

This piece is dedicated to the lives lost to battles with mental health. The left side represents what others see when someone is struggling with a mental health issue, whole, beautiful, together.

While the right side represents the chaotic, shattered, dark insides of someone struggling with this disease. This piece is a reminder that many among us battle their demons in silence, and we never know what someone is going through on the inside. The right side is hand bent ½" rolled steel, heated with acetylene torches and bent to the predesigned shape of the full butterfly wing. The inner part of the wing is made from 5/16" rolled steel, and using the same method as the outer shape of the wing, the inner wing was built. Hand plasma cut 16g sheet metal is welded into some of the full wing. Using heat, these pieces are coloured to give the metal a rainbow look. The left side is made up of hand plasma cut butterflies. Made of 16g steel, three different sizes of butterflies were cut and sporadically placed to make a similar shape as the whole butterfly wing. These butterflies were welded together and attached to round stock to keep the shape and give the wing more structure. The wing was painted teal to represent suicide awareness. Black paint was sprayed on top of the teal and tissue paper was used to give texture and remove some of the black paint giving the butterflies a mixture of teal and black.

Dimensions of Exhibit

Each side, 6ft high and 3ft wide

Forged in Silence: Wings of Change
Emily Stewart
Photos: Ashley Fickbohm, Southern Meadows Photography

Individuals, Educational Organisations and Institutes Inspiring Champions

Featured in this section are individuals who are working within their organisations and countries to promote welding skills and welded art to young people, including motivating them to take up careers in welding related fields.

- **Bradley Bootsma:** A high school welding teacher at the GW Graham Secondary School, Chilliwack, in British Columbia. He is passionate about empowering students through hands-on learning in the trades. In 2023, his school team won the CWB Foundation, Forged By Youth Competition.
- **Rituraj Bose:** The Honorary Secretary General of The Indian Institute of Welding (IIW-India) and Chairman of the IIW-India Certification Division. He is actively involved in many IIW-India activities related to the promotion and upliftment of skills in the welding industry.
- **Svetlana Boshnakova:** The regional representative of the Bulgarian Welding Society (BWS) in her home town of Burgas and a Mechanical Engineer at LUKOIL Neftohim Burgas AD in Burgas. Since 2020, she has been actively involved in organising and holding the BWS welding skills competitions held in Sofia each year.
- **Jamie Irwin:** A welding instructor at Crocus Plains Regional Secondary School in Brandon, Manitoba. He believes that it is important that students can learn welding skills, but also see how they can use those skills to improve the community that they live in and give them a sense of pride.
- **Kris Mercer:** The WEC Academy Training Manager and Master Welding Instructor, in Blackburn, Lancashire, United Kingdom. Kris uses welded art projects to help motivate students as well as hone the skills of the apprentices. By collaborating with various external organisations some very worthy and well known projects take place.
- **Jackie Morris:** A welding technologist involved in training in welding skills at Conestoga College of Technology and Advanced Learning in Ontario, promoting careers in welding to a diverse range of people. Between inspiring future tradesmen and running one of the College's many welding sites, she enjoys creating welded art.
- **Carl Parrish:** Lecturer in Fabrication & Welding at Coleg Cambria in Wrexham, Wales, United Kingdom, as well as Competition Lead for the welding competition in Inspiring Skills Excellence in Wales (ISEiW), and Worldskills UK Training Manager for Welding.
- **Vladimir Ponomarov:** Professor in the School of Mechanical Engineering at the Uberlandia Federal University (UFU) in Brazil, is an ardent advocate for welded art. Vladimir is a Doctor of Technical Sciences (Welding Technology) and has a degree as a Welding Engineer.
- **Sachin Kaluskar:** Sachin Kaluskar is the Designated Partner of Infine Art Ventures LLP, and works very closely with supporting the Indian Institute of Welding (IIW-India) with its welded art competitions. Sachin is a visionary welded art promoter leading the transformation of industrial scrap into monumental artworks.

Bradley Bootsma *(Canada)*

Bradley Bootsma is a high school welding teacher at GW Graham Secondary School in Chilliwack, British Columbia. He is passionate about empowering students through hands-on learning in the trades. He specializes in project-based learning where students apply advanced welding techniques to create meaningful, often large-scale, art pieces. His approach blends technical training with creative expression, helping students develop both employable skills and a deeper connection to their craft. He has led several community-focused welding projects, including the Grizzly Bear BBQ, and continues to advocate for youth participation in skilled trades.

His courses range from introductory metalwork to advanced fabrication. Current class projects include a custom-designed CNC-cut gate and recliner-style seating. Advanced students are encouraged to design and build their own dream projects, taking full ownership from concept to finished product. Each year, his program also takes on a senior "legacy" project to give back to the shop—recent examples include heavy-duty fabrication tables and reclining chairs—helping transform the space into a welcoming, student-driven workshop rather than a traditional classroom.

Rituraj Bose *(India)*

Rituraj Bose is the Honorary Secretary General of The Indian Institute of Welding (IIW-India) and Chairman of the IIW-India Certification Division. He is actively involved in many IIW-India activities related to the promotion and upliftment of skills in the welding industry.

Each year he conducts the National Welding Skills Competitions. He also conducts and encourages all to participate in the very successful annual competition of IIW-India, 'Welded Marvels - Project Trash to Treasure', mainly involving amateurs producing welded sculptures from scrap.

He actively encourages women to participate in welding activities including skills development and welding competitions nationally and internationally. He has been instrumental in bringing youth to the welding field through Students' Chapters including motivating young engineering students to be part of the welding fraternity.

He is also actively involved in National Welding Capability (NWC) projects including involvement with government through various skill development activities and promotion of the United Nations Sustainable Development Goals (SDGs) including improving biodiversity.

He represents India in the International Institute of Welding (IIW), in the Asian Welding Federation (AWF), is a Board Member of the Indian Iron & Steel Sector Skill Council (IISSSC) and flag bearer of IIW-India's motto 'Welding for Nation Building'.

Svetlana Boshnakova *(Bulgaria)*

Svetlana Boshnakova is a member of the Bulgarian Welding Society (BWS) and the BWS regional representative in her home town of Burgas. She is a Mechanical Engineer at LUKOIL,Neftohim Burgas AD in Burgas. She has a PhD in Welding Engineering and is an International Welding Engineer, International Welding Inspector and International Metal Additive Manufacturing Coordinator.

She has been actively involved since 2020 in the organising and holding of the BWS welding skills competitions held in Sofia each year. On a voluntary basis, this includes organising teams of two students from up to 11 colleges across Bulgaria to participate in the competitions. These competitions also include the welded art competition which students prepare in their home town and bring to Sofia for the final judging.

Svetlana is the coordinator organising this including arranging the judging, compiling the reporting on the outcomes of the competitions, liaising on the information to be put in the IIW Digital Collection and with BWS on the information to be put on the BWS website.

Svetlana is a keen advocate on improving the skills of young people in Bulgaria and motivating them to participate in the range of skills competitions including those in welded art.

Jamie Irwin *(Canada)*

Jamie Irwin is a welding instructor at Crocus Plains Regional Secondary School in Brandon Manitoba. Together with his colleagues, he believes that it is important that students learn welding skills, but also see how they can use those skills to improve their community, giving them a sense of pride when they see something that they have created out in the community.

During their time at Crocus, students are involved in various art projects to supplement their learning at both the school and community level. Students have used their welding skills to design and create signs for the school, Brandon University, graduation decorations, house numbers and property signs.

In 2021, Jamie spearheaded a project which helped a group of 12 students construct a pair of metal angel wings, six foot tall with 146 feathers welded to the frame. The project was placed third in the CWB Foundation “Forged By Youth” competition, winning $5,000 towards the Crocus welding programme.

They have also been involved in creating larger projects like components for skateparks, firepits, a large charcoal BBQ for Octoberfest, and 172 items that Manitoba Hydro and the City of Brandon use to light up for an ice-skating display used in wintertime.

Kris Mercer *(United Kingdom)*

Kris Mercer is the WEC Academy Training Manager & Master welding Instructor, in Blackburn, Lancashire, United Kingdom. Kris uses welded art projects to help motivate students as well as hone the skills of the apprentices. By collaborating with various external organisations some very worthy and well known projects take place.

A famous one in the UK was a Commission to create a stunning LS Lowry tribute statue manufactured by Kris and WEC Group apprentices celebrating Lowry's famously painted matchstick man and his dog, included in several of his works, and is located at Knott End-On-Sea on the Lancashire coast.

A team of apprentices has just started work on a Commission to create a large sculpture in Corten steel of the Curlew, a unique moorland bird-species. It is due to be installed at a gateway entrance to Darwen Moor. This 4m high sculpture celebrates and draws attention to the fragile status of this bird and the moorland ecology it depends on.

A bench designed and made by WEC apprentices from 127 surrendered knives has just been installed at Blackburn Cathedral as part of efforts to raise awareness about the impact of knife crime during Knife Crime Awareness Week.

https://www.wec-group.com/lives-not-knives-project.html

Jackie Morris *(Canada)*

Jackie Morris is a welding technologist involved in training in welding skills at Conestoga College of Technology and Advanced Learning in Ontario and promoting careers in welding to a diverse range of people. Between inspiring future tradesmen and running one of the College's many welding sites, she enjoys creating welded art.

Through her leadership in various Skills Ontario summer camps, she has inspired many young people to explore welding, making it an engaging entry point into these fields. As a welding facilitator for the "Jill of All Trades" event at Conestoga College, Jackie has dedicated her efforts to showcasing diverse trades and technology to high school age students, highlighting the multitude of career paths available to them. She has helped in workshop initiatives, such as "A Day with a Difference," "TNT - trades & technology", further emphasising her commitment to encouraging people to consider trades and technology as viable career opportunities.

The tangible pieces of welded art created during these workshops serve as both a creative outlet, and a lasting reminder, of the possibilities that lie ahead. Through her efforts, Jackie not only teaches a skill but also inspires a new generation to envision their potential within the trades.

Carl Parrish *(United Kingdom)*

Carl Parrish qualified as a welder in 1990 after serving a four year apprenticeship at Air Products manufacturing facility in Wrexham, Wales. He was then involved both as a welder and welding inspector in the manufacture of high quality pressure equipment until 2009 when unfortunately the company closed down its Wrexham site. He became a Lecturer in Fabrication & Welding in 2009 in Wolverhampton joining Coleg Cambria, in Wrexham, in 2012.

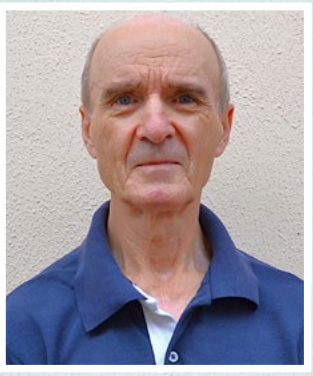
The College delivers a range of apprenticeship courses and other courses, in accordance with national requirements.

The college has an excellent reputation for the promotion of welding careers and motivation of students. Besides his training duties, Carl plays a major role in the promotion of skills where he is currently the Competition Lead for the welding competition in Inspiring Skills Excellence in Wales (ISEiW) inspiringskills.gov.wales/competitions

Carl is also the Worldskills UK Training Manager for Welding www.worldskillsuk.org/

currently training two competitors, one of which could be representing the UK on the global stage at the Worldskills International event in Shanghai in September 2026 - worldskills2026.com/

Vladimir Ponomarov *(Brazil)*



Professor Vladimir Ponomarov in the School of Mechanical Engineering at the Uberlandia Federal University (UFU) in Brazil, is an ardent advocate for welded art. Vladimir is a Doctor of Technical Sciences (Welding Technology) and has a degree as a Welding Engineer.

Prior to taking up his position at UFU, he was the Vice-Director of the Paton Electric Welding Institute Training and Qualification Centre in Kyiv in Ukraine. He actively promoted the excellent skills of Paton welded art specialists such as Grigorii Dochkin.

During his career, he has also visited several countries such as India and Cuba to help uplift welding skills in those countries.

From 2001 to 2009, he represented Ukraine at the International Institute of Welding (IIW) and Brazil from 2009 to 2018. In particular, he spent much time working on projects in IIW Commission XIV, Education and Training, and the IIW International Authorisation Board (IAB).

On a number of occasions, he was also responsible for the making and presenting of the famous Paton welded titanium rose to the “first lady” of the IIW member organising the IIW Annual Assembly.

Sachin Kaluskar *(India)*

Sachin Kaluskar is the Designated Partner of Infine Art Ventures LLP, and works very closely with supporting the Indian Institute of Welding (IIW-India) with its welded art competitions.

ArtCroc is a registered brand of Infine Art Ventures LLP, a DPIIT (Govt of India) recognised Art Start-up known for its unique idea of creating beautiful sculptures from scrap metal.

Sachin is a visionary welded art promoter leading this transformation of industrial scrap into monumental artworks. With a deep commitment to sustainability, he has upcycled over 142,000 kilograms of metal waste into thought-provoking sculptures displayed across India and in the Democratic Republic of Congo. His creations blend artistic expression with environmental consciousness, promoting circular economy principles.

ArtCroc's talented team of professional artists and trained welders have adorned public places like railway stations, airports, traffic islands etc with large sculptures welded using metal scrap like mild steel, stainless steel, automobile scrap etc. Besides creating better meaningful public places, it has also provided more earning opportunities for welders. Normal welders earn INR 400 to 700 per day while a welder creating artwork earns INR 1000 to 1200 per day.

Bulgarian Welding Society (BWS) Welded Art Competitions

In March 2025, BWS held a national competition "Best young welder 2025" which included a presentation of a welded art exhibit on a previously announced theme. The competition was attended by 22 students from 11 professional high schools from all over the country. The competition was held for the sixth consecutive year under the auspices of the Bulgarian Ministry of Education and Science and with the assistance of the Bulgarian Welding Society (BWS).

The students presented to the Jury and their peers on the topic, "Progressing Biodiversity, Sustainable Development Goals 14 and 15 -Through the Eyes of Young Bulgarian Welders". The compositions were evaluated on criteria such as compatibility with the declared theme, strength, functionality and performance.

All 11 Exhibits were excellent in complying with the theme and three exhibits are featured in the IIW 2025 Digital Collection.

- **Noah's Ark: Andrey Nikolaev Aksenov and Vicky Petrova Strashimirova.**
- **Together With Nature for Brighter Future: Antonio Vladimirov Taushanov and Daniel Stefanov Velkov,**
- **Fire Came in the Beginning: Alexander Georgiev Kostov and Dimitar Todorov Ivanov.**

The following high schools took part: PGMEE Burgas; PG "Acad. S.P.Korolev", Dupnitsa; PG Sandanski; PTG "N. Vaptzarov", Vratsa; PTG "Vasil Levski", Gorna Oryahovitsa; VET "St. Dimitar Solunski", Beloslav; PG "Stefan Karadzha", Elhovo; PTG "Ivan Raynov", Yambol; PGT Burov, Ruse; PZHPT Marie Curie, Pernik and PGMET "Hristo Smirnenski", Knezha.

By linking with the BWS website, you can view the Exhibits for the 2025 competitions.

bws-bg.org/en

Andrey Nikolaev Aksenov and Vicky Petrova Strashimirova *(Bulgaria)*

Andrey Nikolaev Aksenov and Vicky Petrova Strashimirova were representatives of PZHPT Marie Curie, Pernik, in the Bulgarian Welding Society (BWS) 2025 welded art competition. They produced a wonderful Exhibit, "Noah's Ark", targeted at showing the salvation of the living species on Earth.

For this exhibit and the whole concept of showing how important it is to save biodiversity as a vital resource, and that it is essential for humanity as a whole, Vicky and Andrey won first prize in the Bulgarian Welding Society (BWS) 2025 welded art competition.

In the context of "Noah's Ark" and contemporary challenges and advanced technologies, they believe that humans should strive to protect the environment.

Today, humanity is facing ecological crises, such as climate change, biodiversity loss and pollution. In a sense, our planet should be considered as a modern Vessel of Biodiversity, which must be protected to ensure the future for all living beings.

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Exhibit "Noah's Ark"

Andrey and Vicky created from metal, a ship and animals – bee, giraffe, goat, rhinoceros, spider, horse, mouse, rabbit, elephant, fly and flower. For the production of the exhibit they used steel bar, profile, nuts, washers and bolts. They applied two types of welding, Shielded Metal Arc Welding (SMAW) - process 111, and Gas Metal Arc Welding (GMAW) - process 135, and different methods of metal processing – cutting, bending and grinding. They received guidance and support from teacher Eng. Zornitsa Mavrova.

Dimensions of Exhibit

60 cm high x 45 cm wide x 35 cm deep

Noah's Ark
Andrey Nikolaev Aksenov and
Vicky Petrova Strashimirova

Antonio Vladimirov Taushanov and Daniel Stefanov Velkov *(Bulgaria)*

Antonio and Daniel represented PG "Acad. S.P.Korolev", Dupnitsa, at the Bulgarian Welding Society (BWS) 2025 welded art competition.

Knowing that biodiversity unites all life forms on Earth, they understood the importance of protecting it. Their exhibit presented the idea of harmony between wildlife and modern man. In the centre of the composition they depicted a river with sheer banks, which seems to outline the boundaries of two different worlds – the virgin nature and the modern city. Since their town of Dupnitsa is located at the foot of the Rila Mountains, they recreated a small part of the biodiversity in Rila National Park where part of the animal world is threatened with extinction and is listed in the "Red Data Book of the Republic of Bulgaria". They chose to show the brown bear, the wolf and the deer –animals that are extremely important for preserving ecological balance, as well as the white fir and other fir species.

On the opposite bank of the river is located the modern urban environment with its factories, residential buildings, highways and the people who inhabit it. Through the family with two young children, they confirm the idea that in childhood one should be educated in the love of nature and care for its conservation. Preserving biodiversity on a local and global scale is vital for humans, who are part of the great ecosystem of Planet Earth. That is why in the exhibit they have built a strong bridge over the river between the two worlds – a connection that never breaks!

Just as animals and plants depend on humans, so our lives depend on maintaining this ecological balance!

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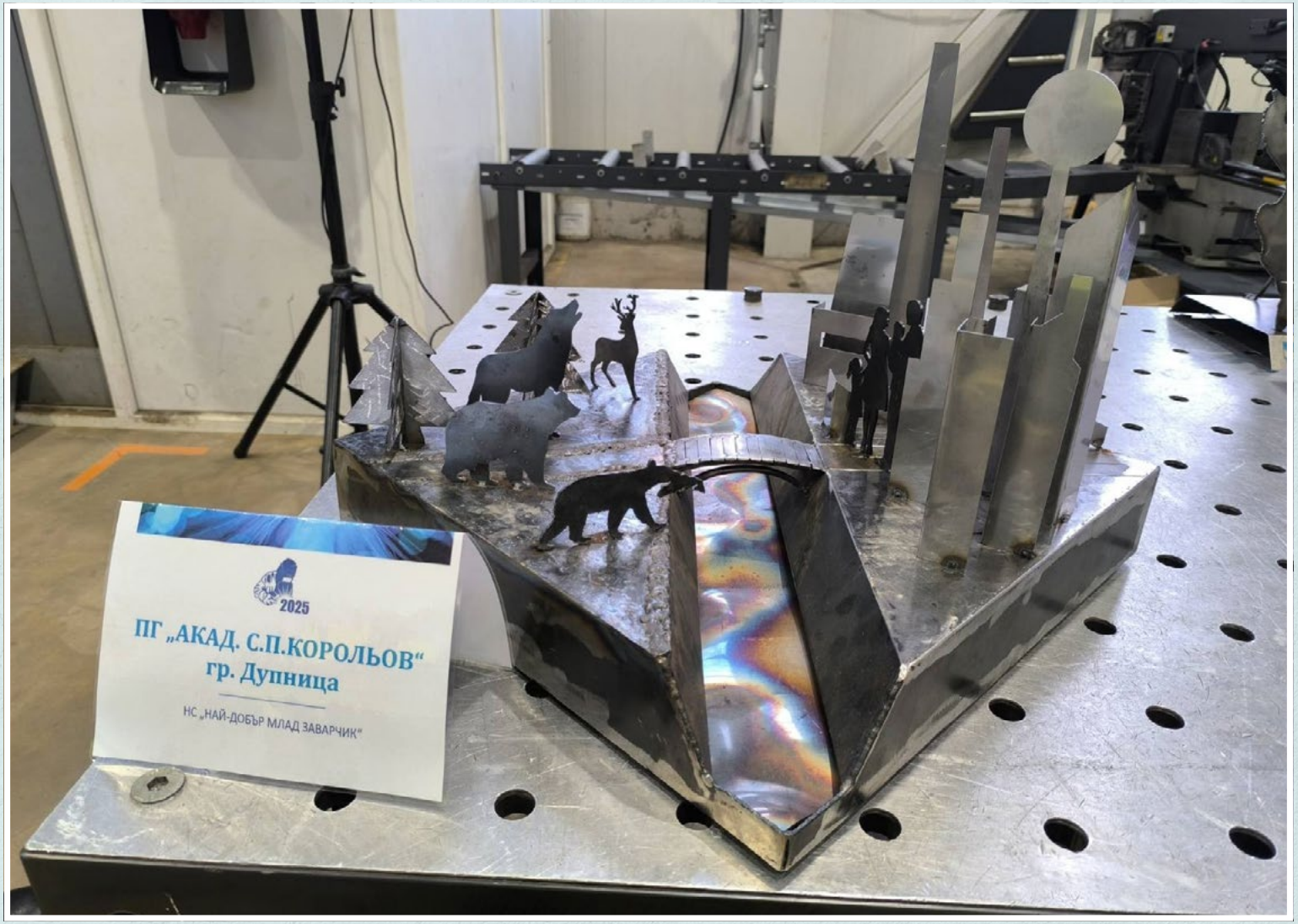
Daniel Stefanov Velkov and Antonio Vladimirov Taushanov (left to right)

Exhibit "Together With Nature for a Brighter Future"

The materials used for the exhibit were carbon steel and stainless steel. Antonio and Daniel invested in using both precision laser cut figures and waste material, since the recycling of raw materials is also part of the conservation of the natural world. To achieve the effect of the clean waters of the river, they used a specific technique of processing stainless steel – by heating with a gas burner and tapping the metal. They used Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW) and Gas Tungsten Arc Welding (GTAW) processes with appropriate filler materials and shielding gases.

Dimensions of Exhibit

60 cm high x 45 cm wide x 35 cm deep



Together With Nature for a Brighter Future
Antonio Vladimirov Taushanov and Daniel Stefanov Velkov

Alexander Georgiev Kostov and Dimitar Todorov Ivanov *(Bulgaria)*

Alexander Georgiev Kostov and Dimitar Todorov Ivanov (left to right)

Alexander and Dimitar were representatives of PTG N. Vaptzarov, Vratsa, in the Bulgarian Welding Society (BWS) 2025 welded art competition.

Their exhibit is a mechatronic system depicting the cycle of nature and biodiversity on Earth. Various representations of flora and fauna are located on rotating gears. The idea of the participants is to convey a message: if one of the species disappears, the others also stop their existence (development). This is also emphasised by the symbols welded on the base plate for the species - fish, owl and apple – which represent the vulnerability of the ecosystem and the risk of breaking the entire cycle if even one of its elements disappears. The circle is made thanks to the “Sun”, mounted on an arch, symbolising the sky. In the base plate of the installation are embedded green LEDs, symbolising fields and grasses – a source of life for many other species. At the other end of the “sky” is mounted a “satellite”, embodying humanity’s eternal quest to discover new worlds.

They have depicted half of the globe using curved strips and on it, with thin sheet of stainless steel, are situated examples of the flora and fauna. The sun with its life bringing light is mounted on one of the strips. It symbolises the fire that is the essence of life beginning.

The symbol of the gymnasium is on the inside of a rectangular plate made from scrap metal with the letters and digits cut in a suitable form. The logo of the school is laser engraved.

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Exhibit “Fire Came in the Beginning”

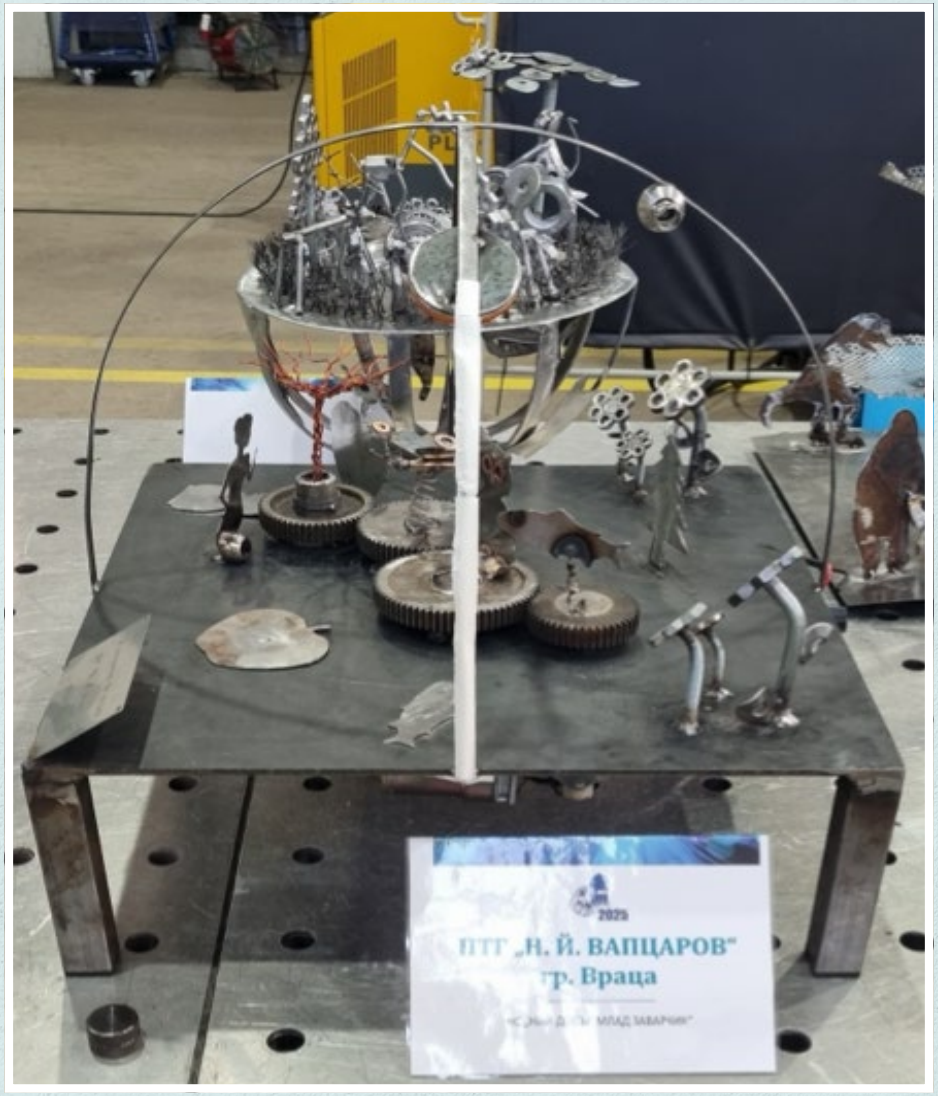
The whole system is driven by an electric motor from an old car’s windshield wiper, with a circuit board to adjust the revolutions. The power supply is provided by a 12 V battery.

Materials used include carbon sheet metal, square profiles, copper wire and copper cable shoes, scrapped gears, metal studs, nuts, washers and screws.

Welding methods used were Gas Metal Arc Welding (process 135) and Gas Tungsten Arc Welding (process 141) with appropriate filler materials and shielding gases.

Dimensions of Exhibit

45 cm high x 70 cm diameter



Fire Came in the Beginning
Alexander Georgiev Kostov and Dimitar Todorov Ivanov

The Indian Institute of Welding (IIW-India)

IIW-India's Welded Art Exhibitions and competitions.

As a part of its drive to improve India's National Welding Capability (NWC), IIW-India has introduced strategies to help alleviate the skills shortages in the welding field in line with Indian Government initiatives. IIW-India also supports the United Nations Sustainable Development Goals (SDGs) and as part of its strategies, it integrate its projects with the UN SDGs.

In 2020, it held a welded art exhibition as part of the 5th IIW International Congress and Weld India Exhibition 2020 in Navi Mumbai from 06 to 09 February 2020. This also inspired an Indian artist Nidhish Gopinath from Kottayam District of Kerala, to submit exhibits for both the IIW 2020 and IIW 2021 Digital Collections as well as Sachin Kaluskar of Infine Art Ventures LLP, Vadodara, who submitted the exhibit "The Protectors" in 2021 as a tribute to our Covid Heroes.

IIW-India was further inspired to hold a welded art national competition on Welded Marvels "Project Trash to Treasure" in February 2022 and displayed some of the exhibits during its National Welding Seminar 5-7 May 2022 in Pune. The competition was organised in conjunction with the Association of Welding Products Manufacturers (AWPM) and ably supported by M/s ADOR Welding Ltd.

IIW-India has continued to hold its Project each year, which is mainly for the hobbyists, and featured some of the exhibits in the 2023 and 2024 IIW Digital Collections. This year in line with the theme of progressing biodiversity, three exhibits are featured in the IIW 2025 Digital Collection:

- **Advanced Welding Laboratory, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat, Gujarat, Team Akshay Bhupatbhai Patel, Rasaniya Bhumika Shivkumar and Sai Charan; guided by Dr. Vivek D. Kalyankar. Exhibit: Lion.**
- **K Selvakumar of Welding Research Institute (WRI) of Bharat Heavy Electrical Ltd. (BHEL), Tiruchirappalli. Exhibit: KALPA*WRI*KSHA.**
- **Anil Kumar Bagarti, Shyam Metalics & Energy Limited, Sambalpur, Odisha. Exhibit: Black Cobra.**

SVNIT Team *(India)*

As part of the IIW-India National Competition for Welded Marvels (2024) "Project Trash to Treasure", a team from the Advanced Welding Laboratory, S V National Institute of Technology (SVNIT), Surat, Gujarat, combined to produce the sculpture "Lion". Akshay Bhupatbhai Patel, Rasaniya Bhumika Shivkumar and Sai Charan (left to right in team photograph) under the guidance of Dr V. D. Kalyankar, Associate Professor, Department of Mechanical Engineering (DoME), SVNIT, comprised the team.

The lion was chosen as the subject since it holds a special significance in ancient tradition and is an animal known for strength, power and courage. In many cultures, the lion is also associated with royalty, leadership and protection.

The project was supported by the SVNIT Surat Students Chapter, IIW-India Baroda Branch. It was intended that the sculpture would highlight the importance of recycling of waste materials and also the importance of welding to society.

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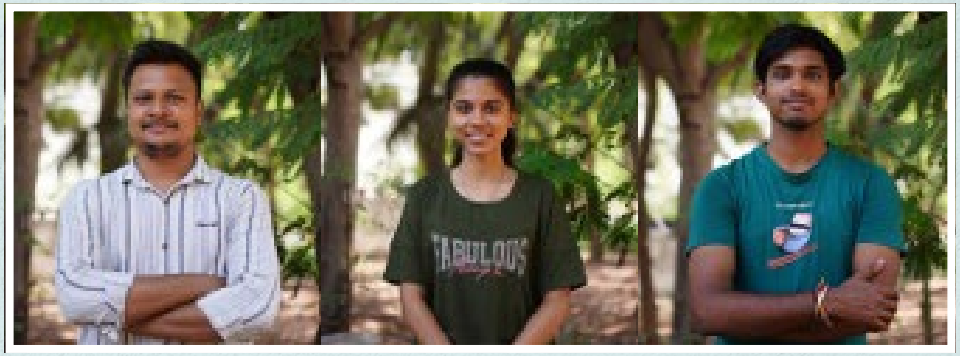

Exhibit "Lion"

The sculpture was fabricated at the Advanced Welding Laboratory, SVNIT Surat, using scrap materials and gas metal arc welding to join the materials. Scrap materials involved mild steel metal rings, strips, hooks, sheet and wire as well as galvanised bolts, washers and nuts.

The conversion of this scrap material into the Lion face sculpture serves as encouragement to society for reuse, reduce and recycle for a better future. It exemplifies creativity, sustainability, and skilled craftsmanship. This project demonstrates how discarded materials can be transformed into a striking piece of art through innovative welding techniques, emphasizing the importance of recycling and repurposing waste.

It also underscores the significance of welding as a vital industrial skill that contributes to both functional and aesthetic advancements. Displayed at SVNIT Surat, this lion sculpture serves as a motivational piece, urging individuals and industries to rethink waste management and embrace eco-friendly solutions while appreciating the fusion of engineering and art.

Dimensions of Exhibit

61 cm high x 45 cm wide x 36 cm length

Lion
SVNIT Team

K Selvakumar *(India)*

The Welding Research Institute (WRI) at Bharat Heavy Electricals Limited (BHEL) in Tiruchirappalli (Trichy), India, will celebrate its 50-year anniversary of its formation in 2025. It was established on Nov 1 1975 by the Government of India with assistance from UNIDO/UNDP under the aegis of BHEL. It is the premier research institute in welding in India and has been instrumental in promoting welding research in the country.

To recognise this achievement, K Selvakumar, a welding technician at WRI, decided to create a welded art exhibit which became the runner-up in the IIW-India National Competition Welded Marvels 2024 “Project Trash to Treasure”.

KALPA***WRI***KSHA symbolises the wish fulfilling efforts in applied welding research at WRI. This has evolved out of churning of the mind, just like the mythological Kalpavriksha from churning of Palazhi. The tree exhibit has many materials, material sizes, welding processes, welding positions, weld metal sizes and edge preparations, reflecting the diverse process expertise of WRI and made from scrap material for a beautiful display.

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Exhibit “KALPA*WRI*KSHA”

The tree is made out of different scrap materials and cut bits of electrodes. The base is made of bead-on-plate welding using the Submerged Arc Welding (SAW) process on 16 mm thick alloy steel plate (SA 335 Gr.22).

The bottom trunk of the tree is made of a cut piece of 127 mm dia carbon steel pipe welded to the top trunk made of 114mm dia alloy steel using Flux Cored Arc Welding (FCAW).

To obtain the required finish representing the bark of the tree, beads were deposited using Gas Metal Arc Welding (GMAW). Limbs of the tree are cut bits of alloy steel tube (Gr.12) attached to the trunk by fillet welds and rod at the other end made by Shielded Metal Arc Welding (SMAW).

Further branches are made of 6.3 mm dia. core wires of expired E7018 electrodes and 2.4 mm dia. Gas Tungsten Arc Welding (GTAW) filler rods. The shiny bunch of leaves of the tree are made from 0.3 mm thick aluminium sheet.

The fully grown five prop/aerial roots in the tree indicate the five decades of service to the Nation, with sprouts for emerging decades.

On the whole, the welded art exhibit symbolises the expertise and skills sets of the manpower of Team WRI.

Dimensions of Exhibit

90 cm high x 90 cm wide x 70 cm deep

*KALPA**WRI**KSHA*
K Selvakumar

Anil Kumar Bagarti *(India)*

Anil Kumar Bagarti works as a mechanical engineer in fabrication and maintenance at Shyam Metalics & Energy Limited, Sambalpur, Odisha. He has a Bachelor of Technology, majoring in Production Engineering, obtained at the Veer Surendra Sai University of Technology (VSSUT) formerly UCE, Burla.

He advocates addressing the challenges of waste repurposing which requires a holistic approach that combines technological advancements, economic incentives, regulatory reforms, and cultural shifts.
By implementing these solutions, waste repurposing can become a more efficient, scalable, and economically attractive option, leading to a more sustainable future.

His exhibit shows a very simple approach to this concept. The Black Cobra in the context of Indian biodiversity refers to the Indian Cobra (Naga raja) which is found throughout the Indian sub-continent.
While not endangered, their populations have been impacted by habitat loss, and they are now protected in India. They are known for their distinct hood markings and are associated with various cultural and mythological beliefs.

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Exhibit “Black Cobra”

Black Cobra is a sculptural representation of the Indian cobra, crafted entirely from industrial scrap and discarded metal components. The piece aims to reflect the intricate beauty and silent power of this often-misunderstood reptile, which plays a crucial role in maintaining ecological balance by controlling rodent populations.

The construction involved arc welding techniques using mild steel rods, chains, and salvaged automotive parts, carefully shaped to capture the sinuous form and alert posture of a cobra. The unique challenge was to convey fluidity and movement through inherently rigid materials.

By transforming waste into art, Black Cobra underscores the potential of upcycling as a method of artistic expression and environmental advocacy. The sculpture serves not only as a tribute to biodiversity but also as a reminder of the impact of industrialisation and waste on wildlife habitats. It highlights the importance of coexistence and conservation through creative reuse, aligning with the values of sustainable development.

Dimensions of Exhibit

70 cm high x 58 cm wide x 33 cm deep

Black Cobra
Anil Kumar Bagarty

E.O. Paton Electric Welding Institute

The world famous E.O. Paton Electric Welding Institute was formed in 1934 and is the Ukrainian Responsible Member of the International Institute of Welding (IIW). For many years, it was traditional for a senior representative of the Paton Institute to present a welded titanium rose to the 'first' lady of the IIW Member responsible for organising the IIW Annual Assembly each year.

Konstantin Yushchenko, E.O. Paton Electric Welding Institute, Ukraine, presenting the traditional titanium rose at the Annual Assembly banquet in Croatia, 2007.

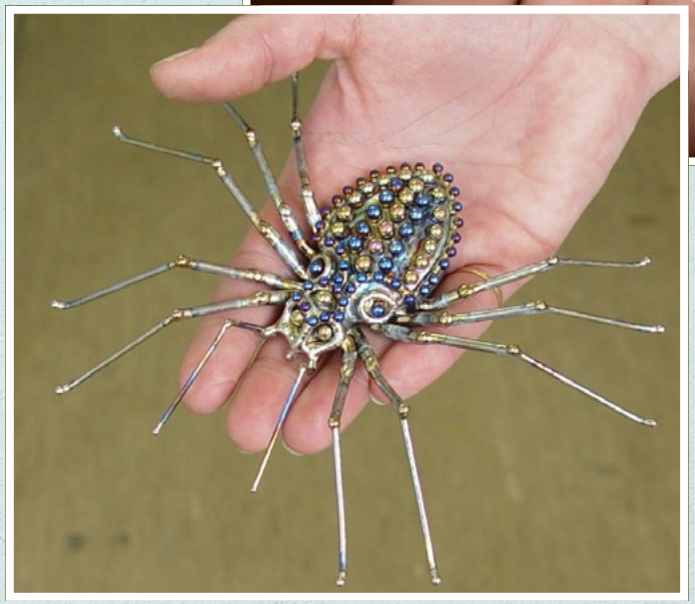
Grigorii Dochkin
(Ukraine)

Grigorii Dochkin was an instructor at the Training and Qualification Centre of the E.O. Paton Electric Welding Institute in Kyiv, Ukraine.

He also had a tremendous ability for producing welded art particularly in Titanium. Grigorii passed away in 2013 but he left an indelible impression with his welded art including a self-portrait of himself.

Although the actual practice of welding Titanium is very similar to welding mild steel, the effects of having oxygen contamination in the welds can have a serious effect on the integrity of the welds. The degree of contamination can be indicated by the actual colour of the weld ranging from a bright silver lustre indicating no contamination through to light or heavy straw colour with slight contamination and dark blue, purple and yellow with heavy contamination. Although this colour process may indicate a decline in the weld quality, for an artist it can give an array of colours to enhance the visual appearance of the exhibit.

The following exhibits show the tremendous range of talent and skills embraced by Grigorii using Gas Tungsten Arc Welding (GTAW) to produce them.



Ant and Spider
Grigorii Dochkin
Photos Courtesy of E O Paton Electric Welding Institute, Kyiv.

Four Titanium Flowers
Grigorii Dochkin
Photos Courtesy of E O Paton Electric Welding Institute, Kyiv.

Titanium Montage
Grigorii Dochkin
Photos Courtesy of E O Paton Electric Welding Institute, Kyiv.

SkillsUSA Welding Sculpture Competitions

SkillsUSA is the US member of WorldSkills International. Its Mission is to empower students to become skilled professional, career ready leaders and responsible community members.

www.skillsusa.org/who-we-are/we-are-skillsusa

SkillsUSA, a highly motivated organisation, serves over 442,000 career and technical education students and teachers in middle schools, high schools and college/postsecondary institutions nationwide. SkillsUSA is closing the skills gap threatening American industry while empowering the next generation to develop the skills that shape personal and professional success. The American Welding Society (AWS) forecasts that 360,000 new welding professionals will be required by 2028.

The SkillsUSA Championships, including welding, is the national culmination of a year-long process that begins in local SkillsUSA chapters across the country. Local winners advance to district or regional competitions, testing their skills against competitors from other schools. Those winners advance to state competitions each spring, and state gold medallists earn the right to compete nationally at the SkillsUSA Championships each June at the National Leadership & Skills Conference in Atlanta. Along with gold, silver and bronze medallions, competitors may earn scholarships, tools of the trade, and even job offers right off the competition floor.

Perhaps most importantly, they earn the confidence that can only come when you know you're among the best of the best in what you do.

https://www.skillsusa.org/competitions/skillsusa-championships/categories-and-descriptions/

In 2010, the SkillsUSA welding sculpture competition was introduced. Individuals create and present their own welded sculptures based on their own design, fabrication and welding skills. They make their sculptures before the competition and are then judged on their artistry, technical skill and overall presentation. In 2023, a live welding portion was added to the competition. A comprehensive technical standard for the competition is available to members. Professional memberships for individuals not associated with a school or state are offered.

www.skillsusa.org/join/how-to-join

The IIW 2025 Digital Collection features three SkillsUSA medal winners.

- **Scott Schneider, "September Sunrise", Gold Medal Winner, 2023 SkillsUSA Welding Sculpture Championships.**
- **Ben Masters, "The Hunt", Gold Medal Winner, 2024 SkillsUSA Welding Sculpture Championships.**
- **Conner Mullen, "The Afterglow", Silver Medal Winner, 2024 SkillsUSA Welding Sculpture Championships.**

Scott Schneider *(USA)*

Scott's welded art background started shortly after starting welding school in the spring of 2022. Prior to welding school, he had some welding experience where he built ornamental fencing and dabbled in a handful of "blacksmithing" projects. Since the first time he struck an arc, he fell in love with welding and the capabilities it gave him to create just about anything that was within his skillset and resources.

In Autumn 2022, he began his SkillsUSA Journey where he competed in the welding sculpture portion. This is where he began building the sculpture and learnt to use many of the techniques demonstrated in it. This journey led to the 2023 Skills USA National Leadership & Skills Conference (NLSC) in Atlanta, Georgia where he won Gold in the national Skills USA Championships in the welding sculpture college division, an incredible achievement. He is now a welder/ fabricator working in the utilities industry trying to continue his education and welded art skillsets on a daily basis.

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Exhibit "September Sunrise"

"September Sunrise" represents Wildlife conservation, habitat conservation, and the many beautiful resources of New Mexico. One of Scott's main goals was to create a metal sculpture that was crafted as realistic looking as possible. The sculpture is made from various metals such as mild steel, stainless steel and copper. By using different welding and cutting processes Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), Shielded Metal Arc Welding (SMAW), Plasma Arc Cutting (PAC), Oxy Fuel Cutting (OFC), and using a hand grinder/ Dremel tool, he was able to create all the different parts to the Elk and its habitat.

All of the parts in the sculpture started as raw pieces of different structural shapes and metals that went through a process of cutting, grinding, and welding to reach their more refined forms that are shown in the sculpture. Welding processes for the different parts were chosen according to material type and their location on the sculpture.

Dimensions of Exhibit

40 cm high x 43 cm long x 28 cm wide

September Sunrise
Scott Schneider

Ben Masters *(USA)*

Ben Masters, from Davis Technical College in Kaysville, Utah, won the 2024 SkillsUSA Welding Sculpture Championships with his sculpture "The Hunt".

His father taught him to weld when he was a child. After learning the basics, they made giant insects from pots and pans to practice. Ben loved making welded art as a child, but he wouldn't make another sculpture until he enrolled in welding school at 26 years old. After finishing the standard classes, he took a sculpting course to fill out his credit hours. He made "The Hunt," and his welding instructor suggested he entered it in the SkillsUSA Welding Sculpture Competition. His sculpture won at the State level and then won the national competition too. He went to school to be a welder, and he left with a passion for sculpting.

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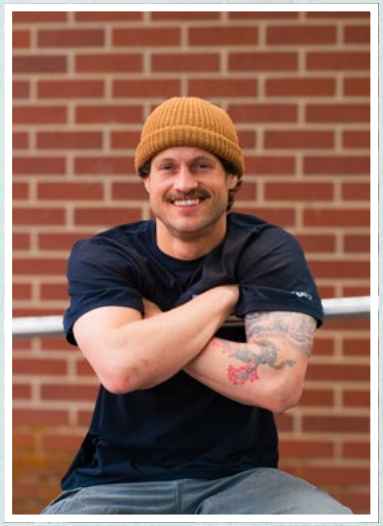
Exhibit "The Hunt"

Ben is from Utah, in the United States. He wanted to represent the delicate desert ecosystem of his home state with his piece "The Hunt."

His goal was to replicate the colour, shape, and texture of the red sandstone rock features that his home is known for.

Utah's mountain lions aren't as well-known as its red arches, but they are an important predator to the ecosystem.



The mountain lion, and the rock feature it stands on, are made of steel.

All material for the arch was cut and formed with a plasma cutter. The rock features are completely hollow, so he could hide the welds on the inside. The colour comes from a thin sheet of copper, cut directly over the steel base with a plasma cutter.

For the mountain lion, he constructed the torso and appendages separately. He cut the silhouette of each limb from 1/8" steel using a laser cutting table. He welded directly onto the silhouettes to build the 3D shape of each piece before combining them. He mostly used Gas Metal Arc Welding (GMAW), but Gas Tungsten Arc Welding (GTAW) was used for the fine facial features.

He added colour to the cat through brass brushing. The juniper tree is made of copper wire and welded to the steel base with silicon bronze.

Dimensions of Exhibit

45 cm high x 50 cm long x 45 cm wide, Weight 44 Kilograms.

The Hunt
Ben Masters
Photos by Carly Erickson

Conner Mullen *(USA)*

Conner Mullen, a student at Southern Regional Technical College, Tifton, Georgia, started making welded sculptures during his senior year of High School for the SkillsUSA Georgia Welding Sculpture Competition. His sculpture "Terrors Below" was a scene of a giant octopus tearing down the Golden Gate Bridge. This sculpture won the State finals and gained him entry to the National finals for the very first time. Last year, he submitted his sculpture "Afterglow". The inspiration for this was in memory of his two friends, Austin Douglas and Travis Hughes. This sculpture was a kinetic ocean scene featuring a swimming manta ray and a moving giant clam and placed second in the SkillsUSA National Welding Sculpture Competition.

Although his SkillsUSA sculpture career is now complete, he enthusiastically makes commissions for people all over the USA and hopefully this will become all over the world someday.

Link to "AfterGlow": www.youtube.com/watch?v=qQkdyoci5Dg
Link to "Blackfish": www.youtube.com/shorts/PoxAXbVNPu4

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Youtube: ConnerMullen

Exhibit "Afterglow"

A definition of Afterglow is "A light or radiance remaining in the sky after the sun has set".

His sculpture, titled "Afterglow", was created to symbolize the good triumphing over the bad.

His sculpture is rich in symbolism. The shipwreck symbolizes loss or troubled times. Even though the ship is small it holds a big role in his sculpture. It is meant to be recognized and remembered for it is hard times that help us grow. As seen in the sculpture, the ship is being engulfed by the beautiful reef, using it to grow.

Both he and his friend Austin played soccer together, and Austin's soccer number was four. In his sculpture, Conner made four different types of animals (manta ray, octopus, clam, and coral) and used four different types of materials, carbon steel, stainless steel, silicon bronze, and copper. As far as the welding techniques to make this sculpture, he used GMAW, SMAW, GTAW, FCAW, and Brazing.

His sculpture's relationship to biodiversity is through all of the different organisms thriving on the coral reef. His sculpture displays a whole ecosystem from the coral using the ship as its base, to the manta ray swimming around looking for food. His sculpture is unique and is aesthetically pleasing because of the beauty of biodiversity.

Dimensions of Exhibit

23 cm high x 45 cm long x 29 cm wide

Conner Mullen
The Afterglow

Owen Croft *(United Kingdom)*

At WEC Group Training Academy, immense pride is taken in nurturing the next generation of metalwork professionals. One approach is to involve apprentices in metal artwork projects.

The projects are part of an evolving series of metal artwork initiatives at the Academy, which includes renowned creations such as the Lowry Sculpture and Dog, Darwen Spitfire, and many more. Each project not only contributes to the artistic legacy of the WEC Group but also plays a vital role in apprentice development.

Throughout the projects, apprentices such as Owen Croft, hone techniques such as TIG welding, as well as traditional metalworking methods like dishing, raising, and the safe and correct use of hand tools—skills that are fundamental to becoming a highly skilled fabricator and welder.

Projects are conducted under the expert guidance of Kris Mercer AWeldI and Master Welding Instructor. The sculptures are more than just a piece of art—they are a celebration of craftsmanship, teamwork, and hands-on learning. They demonstrate how innovation and education can come together to produce something truly exceptional.

The next major project which a team of apprentices has just started work on is a Commission to create a large sculpture in Corten steel of the Curlew, a unique moorland bird-species. It is due to be installed at a gateway entrance to Darwen Moor. This 4 m high sculpture celebrates and draws attention to the fragile status of this bird and the moorland ecology it depends on.

This project has come about through WEC's collaboration with artist and sculptor Marjan Wouda and Blackburn and Darwen Borough Council with further support from Arts Council England.

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Exhibit "The Doberman Dog"

One of WEC's standout training projects, The Doberman Dog Sculpture, is a testament to the creativity, technical skill, and dedication of WEC's apprentices.

Crafted entirely from 316 stainless steel washers, the large-scale sculpture was designed and fabricated by one of WEC's rising star apprentices, Owen Croft.

This visually striking artwork features washers of various sizes, with the majority being 35mm outside diameter, showcasing meticulous attention to detail and precision craftsmanship.

The stainless-steel Doberman sculpture was purposefully integrated into WEC's Apprentice Curriculum to help trainees meet and exceed industry standards while learning valuable skills.

Dimensions of Exhibit

83 cm high x 75 cm long x 25 cm wide

The Doberman Dog
Owen Croft

John Freeman *(United Kingdom)*

Coleg Cambria in North East Wales is one of the United Kingdom's largest colleges with over 7,000 full-time and 20,000 part-time students, and has international links covering four continents.

With the rise in knife related crime in the United Kingdom including Wales, the North Wales Police along with Wrexham County Borough Council and Coleg Cambria (Bersham Road, Wrexham Campus), wanted to have a figure that could be used to raise awareness and education about the dangers of carrying knives and the devastating consequences that happen with the use of knives as weapons.

The North Wales Police and forces up and down the United Kingdom use Operation Sceptre to campaign and tackle knife crime.

Karl Jackson, who is Assistant Principal of Institute of Technology and Site Lead for Bersham Road Campus approached the college Fabrication & Welding Technical Training Officer, John Freeman and the Fabrication and Welding team, to produce a sculpture using knives that had been handed in at the knife amnesty stations via Operation Sceptre.

John Freeman is an exceptionally talented metal worker who studied art at university prior to moving over to the engineering/welding discipline and his creative talents shine through with the masterpiece that he has created.

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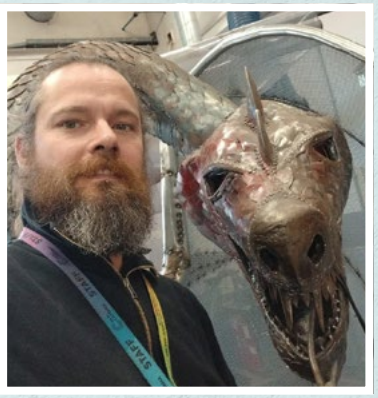


Exhibit "The Welsh Knife Dragon"

The Komodo dragon and other land lizard species are important parts of ecosystems and face threats due to climate change, habitat loss, and other factors, impacting biodiversity. Historically and mythically, dragons have been used to symbolise Power and Authority. Its depiction on the current Welsh Flag illustrates this.

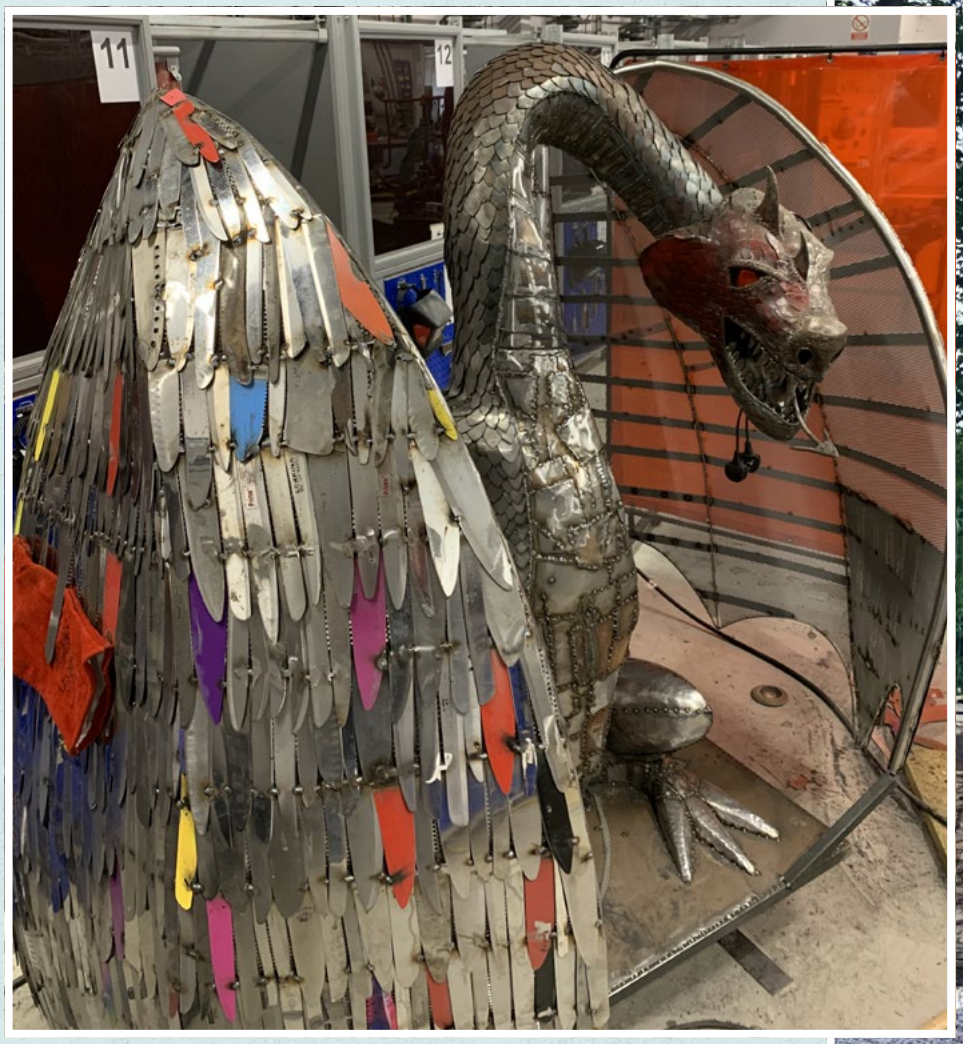
John Freeman designed and created an exhibit using a youth being shielded by a dragon that has approximately 4000 of the amnesty knives covering the wings of the dragon.

The dragon has been built by using carbon steel rods, shaped for the 'bones' and skin put on using recycled off-cuts of sheet metal from the fabrication workshop. Carbon steel sheet metal scales were cut out on the CNC plasma cutter.

Students in training assisted throughout the build process. One particular trainee, Cairan Johns, made the complete tail section, meticulously cutting, forming, shaping and hammering dents in the sheet metal, to create a mottled, blistered effect tail, which looks amazing.

Dimensions of Exhibit

200 cm high x 150 cm long x 220 cm wide



The Welsh Knife Dragon
John Freeman

Jackie Morris *(Canada)*

Jackie is a welding technologist with involvement in training in welding skills at Conestoga College of Technology and Advanced Learning in Ontario, promoting careers in welding to a diverse range of people. Between inspiring future tradesmen and running one of the College's many welding sites, she enjoys creating welded art.

Her exhibit focuses on SDG 15 "Life on Land" which has its primary aim to protect, restore, and promote the sustainable use of terrestrial ecosystems.

This innovative artscape features a large steel drum transformed through plasma cutting, creating an intricate design that seamlessly blends nature and artistry. The centre piece is an elegantly depicted oak tree, symbolizing strength and resilience, with delicate animal tracks winding around its base, evoking a sense of wildlife and natural harmony. Then around, a beautifully detailed sun and sky-scape brings the scene to life, capturing the essence of our delicate ecosystems.

Atop the drum, a half-barrel functions as a vibrant garden basket, where the seeds Jackie and her family planted are waiting for the perfect combination to help them germinate to then thrive and grow.

A central canister through the garden basket serves as an inlet for the main stainless pipe, which elegantly transitions into a flower with a protruding stamen, designed to capture rainwater yet filter out large debris. This water flows down past the garden, directing runoff into a reservoir below. Natural fibre ropes or wicks are strategically placed in the reservoir and garden to enhance moisture distribution and retention in the gardens soil.

This modular system is easily movable by an individual with the aid of a dolly trolley. It embodies sustainable urban farming principles. It aims to empower families to grow their own produce, reduce reliance on industrial farming, and promote local, nutrient-rich food sources through good seed genetics and conscientious soil care.

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Exhibit "Roots Required"

The exhibit used reclaimed galvanised steel sheet, stainless pipe, an electrode container canister, a barrel and a half, a barrel ring, components from an old school desk, a couple of rings from an old tractor exhaust stack, candle holder and old garden art reinvented.

Processing applications used included Plasma Arc Cutting, FCAW, GMAW, angle grinder and hand tools, hammer, anvil and a vice.

Dimensions of Exhibit

60 cm diameter x 222 cm high

Roots Required
Jackie Morris

GW Graham Secondary School Team *(Canada)*

GW Graham Secondary School in British Columbia staff are passionate about empowering students through hands-on learning in the trades and continuously advocating for youth participation in skilled trades. Project-based learning where students apply advanced welding techniques to create meaningful, often large-scale, art pieces, is used to enhance their skills. Technical training is blended with creative expression, helping students develop both employable skills and a deeper connection to their craft. Several community-focused welding projects have resulted all under the guidance and motivation of the high school welding teacher, Bradley Bootsma.

In 2023, a team from the school entered the CWB Association Forged by Youth competition and won first prize with the following students contributing to the sculpture project: Laurynn Davidson, Kallum Vandyk, Maria Barkey, Nolan Barkman, Wyatt Cavanagh, Marcus Dalton, Jared Holosney, Nathan MacNeil, Shea Pankiw, Owen Sheets, Reuben Vanpelt, Hannah Joy Nirwranski, Liam Harrison, Isaac Rychcowski, William Vernon, Cameron McCall, Hayden Pugsley, Tyler Bergin, Colby McLellan and Brandon Smith and Bradley Bootsma providing guidance when required.

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Web: globalnews.ca/news/9784871/bc-students-weld-legacy-project-bear-b-q
www.agassizharrisonobserver.com/local-news/chilliwack-welding-students-take-top-spot-in-national-contest-with-grizzly-bear-barbecue-3117174

Exhibit “Grizzly Bear BBQ”

The Grizzly Bear BBQ is a life-size welded sculpture that also functions as a fully operational barbecue. It was built entirely from repurposed steel by senior high school welding students as a capstone project. The grizzly bear was chosen not only for its significance as a keystone species within North American ecosystems, but also because it is the school’s mascot—making the project deeply personal and meaningful to the student body and community.

The build incorporated MIG welding, plasma cutting, bending, and metal forming techniques, with careful attention to structure, shape, and artistic detail. It took about 5,000 hours to complete. The students first welded together the skeleton of the 4000-pound bear, then covered it with sheet metal. They worked painstakingly to get the shape just right, and covered it with thousands of pieces of rusted metal to simulate the fur.

Students used recycled and scrap metal materials to emphasize sustainability and environmental responsibility. The sculpture is designed to spark conversation around biodiversity, especially the importance of protecting large mammals like the grizzly bear that play vital roles in their habitats. In alignment with UN Sustainable Development Goals 14 and 15, the project encourages dialogue around conservation and sustainability, both locally and globally.

Dimensions of Exhibit

Lifesize

Grizzly Bear BBQ
GW Graham Secondary School Team

Grizzly Bear BBQ
GW Graham Secondary School Team

Lynden Gould and Danek West *(Canada)*

Lynden Gould and Danek West, are both Grade 12 welding students at Crocus Plains Regional Secondary School in Brandon, Manitoba. Both students have been welding for four years in the high school program, and hope to move on to a career in the welding industry.

The culture within the school is to promote welded art to showcase the student's abilities to be creative and problem solving, as well as their welding and finishing skills. A positive purpose of welded art projects undertaken is to promote a sense of ownership in the community.

When the "The Bear" project was created, the students had consulted with the Riverbank Discovery Centre about what type of exhibits they would like around their walking trails. One of the options was animals that are native to the area. The students decided to make a sculpture of a black bear. The final sculpture was completed and installed, with a short write up about the artists and processes used to create it, and is used for public enjoyment and educational purposes with summer camps and school groups.

Lynden and Danek completed all the planning, welding and finishing on the project with Jamie Irwin and three other instructors, providing helpful suggestions and input on occasions. The students are proud of what they created and its contribution to the community.

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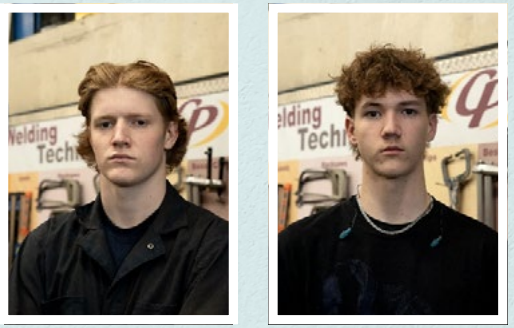
www.brandonsun.com/local/2021/10/22/welding-project-nets-crocus-plains-5000



Lynden Gould and Danek West
Photos by Katerin Miranda Amaya

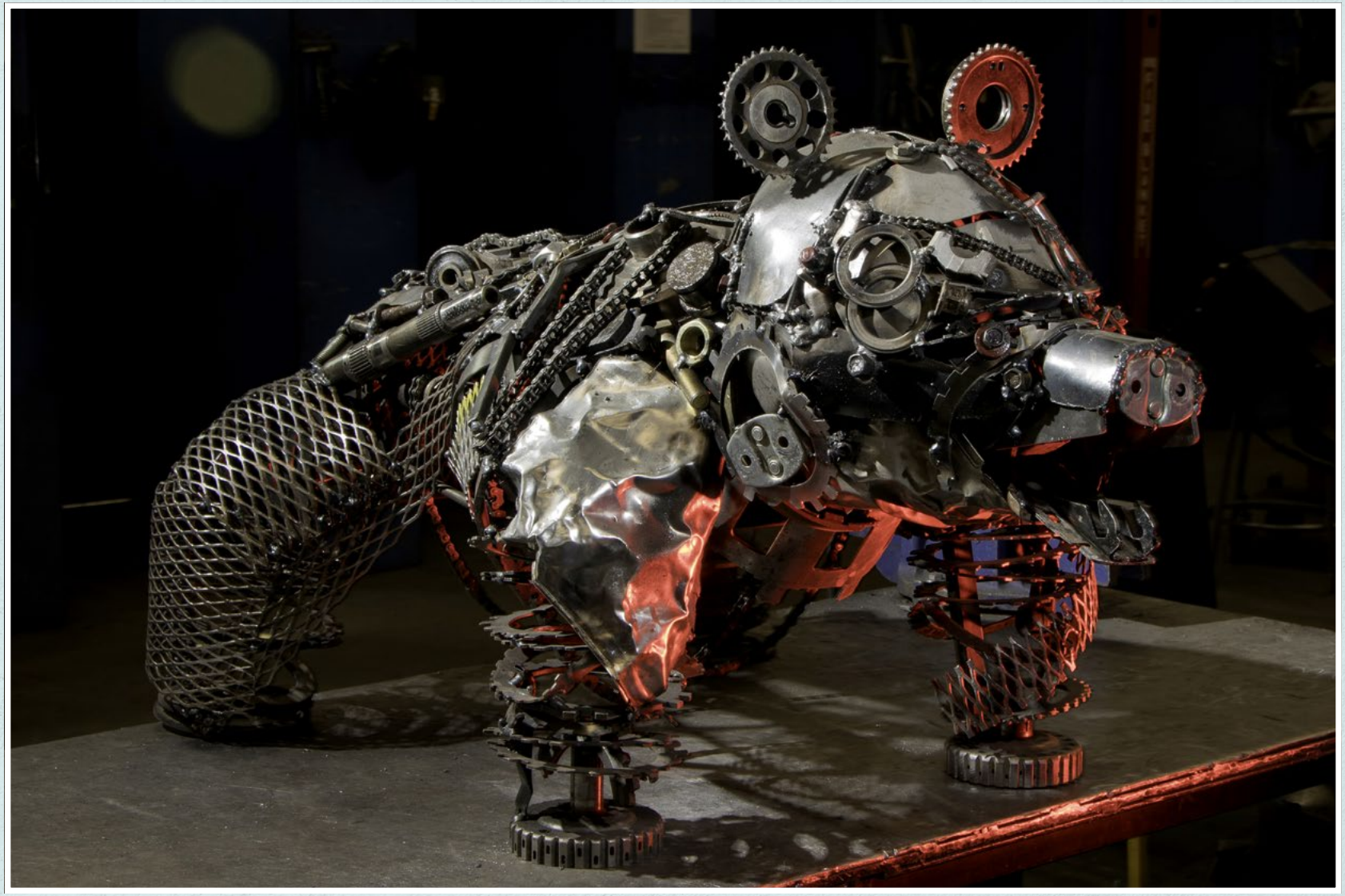
Exhibit "The Bear"

The sculpture was created using the Gas Metal Arc Welding, Plasma Arc Cutting and Oxy-fuel Torch cutting and heating processes used for shaping material. The project was completed using all recycled materials from both the Welding Technology shop and auto parts from the Automotive Technology shop. Selected materials were cut, formed and welded into place in order to complete the structure.

Although this project was created with Gas Metal Arc Welding, both students are also skilled and knowledgeable in Shielded Metal Arc Welding, Plasma Arc Cutting, Gas Tungsten Arc Welding, Oxy-fuel Welding and Cutting and Braze Welding.

Dimensions of Exhibit

60 cm high x 110 cm long x 65 cm wide



Lynden Gould and Danek West
The Bear

Welded Art Collections, Presentations and Links

Introduction

IIW welcomes readers submitting links on welded art collections and presentations to be considered for inclusion in the list below.

Collections and Links

IIW previously held five welded art photographic exhibitions, one live in Slovakia in 2019 and due to the Covid-19 Pandemic, virtual ones in 2020, 2021 and 2023. A virtual one was also held in 2024.

- The live exhibition in Slovakia https://www.flickr.com/photos/iiw2019/sets/72157709860492162
- The IIW digital document "Welded Art Virtual and Live Exhibitions and Competitions-2022 Digital Collections" contains various interesting links and was made available to the public after the 2022 IIW Annual Assembly in Tokyo. http://www.iiw2022.com/files/IIW2022_Welded_Art.pdf
- IIW 2023 Digital Collection Welded Art Photographic Exhibition-Sustainable Development Goals (SDGs) was very successful with 36 participants from 16 countries and has been published globally https://iiwelding.org/wp-content/uploads/2023/07/IIW-2023-Digital-Collection-UN-SDGs-Single-Page.pdf
- The IIW 2024 Digital Collection Welded Art Photographic Exhibition: Progressing UN SDG 4 on Lifelong Learning Opportunities was very successful with over 50 participants from 18 countries and has been published globally.
  Single: https://iiwelding.org/wp-content/uploads/2024/07/IIW-2024-Digital-Collection-1-July-2024-Singles-B.pdf
  Spreads: https://iiwelding.org/wp-content/uploads/2024/07/IIW-2024-Digital-Collection-1-July-2024-Spreads-B.pdf

Papers and Presentations on Welded Art

- **IIW NWC Resource Centre Document Number: IIW NWC-0028-2024**, 2022 WildThings NSW Virtual Welded Art Biodiversity Photographic Exhibition & Digital Collection, WildThings NSW Inc, Chris Smallbone, President, WildThings NSW.
- **IIW NWC Resource Centre Document Number: IIW NWC-0050-0024**, A Glass Act. Teresa Seaton is a stained glass artist who solders her way to beautiful creations, Alexandra Quinones, Welding Journal, Pages 12-15, November 2023. **Acknowledgement:** This article was published by the American Welding Society in the Welding Journal's Nov. '23 magazine. Visit https://www.aws.org/publications/WeldingJournal.
- The Wonderful World of Welded Art, Chris Smallbone, WELD Magazine, CWB Group, Winter 2022 **https://www.weldmagazine.com/weldmagazine/weld-winter2022/MobilePagedArticle.action?articleId=1842505#articleId1842505**
- The Wonderful World of Welded Art, Chris Smallbone, Indian Welding Journal, 2022, Vol 55, Issue 4.p46, ISSN 0046-9092

The ASR International Conference "Welding 2024" also included a section dedicated to Welded Art in which four papers were presented:

- M. Paladi (Politehnica University Timisoara) – Electric arc – Connecting science and art
- L. Popescu (Union of Artists of Romania) – Sparks and welds that thrill
- B. Nueleanu (Union of Artists of Romania) – Welding, a creative spark
- I. Both (Politehnica University Timisoara) – Symbolic exhibit for structural engineering

IIW Vision, Mission and Core Values

Vision

The leading global welding community linking industry, research and education

Mission

Advance welding and joining through a worldwide network

Core Values

IIW is committed to the advancement of welding and joining for a safer and sustainable world

IIW operates based on mutual respect for diversity, culture and languages

For the production of the IIW 2025 Digital Collection we would like to thank A for Art Pty Ltd.
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