Yeongyang Firefly Eco Park

International Dark Sky Park
(Silver Tier)

2017 Annual Report

2017. 10

Prepared by the Yeongyang International Dark Sky Park
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1. LETTER OF SUBMITTAL

September 1, 2017
IDA Board of Directors
International Dark-Sky Association
3223 North First Avenue
Tucson, AZ 85719

Dear IDA Board Members,

Enclosed is the 2017 Yeongyang Firefly Eco Park—International Dark Sky Park annual report.

Yeongyang International Dark Sky Park is the habitat of fireflies and has a beautiful and clean night sky with ecological preservation and was honored with the first Asian designation on October 30, 2015.

Since its designation as Yeongyang Firefly Eco Park—International Dark Sky Park, this annual report (2016.10-2017.09) will present the activities, various policies, events and the continuing activities of local people who keep and care for the park.

We will not only provide constant policies but will also continue to make efforts to develop a better environment to see fireflies and to maintain the beautiful night sky, and to continue the activities with the local residents to develop the Yeongyang International Dark Sky Protection Park.

Sincerely

Kwon Yeong Taek
Governor of Yeongyang
82-54-680-6004
2. GENERAL

2.1 Summary of Yeongyang International Dark Sky Park

Location of the Yeongyang International Dark Sky Park is the darkest place in South Korea and where fireflies live. In 2004, Yeongyang designated the places where fireflies inhabit as a Yeongyang firefly ecological experience village district to preserve the environment. Wang-Pi valley, located in the same area, was designated as “Wang-Pi stream basin ecological conservation district” by the Environmental Office.

Yeongyang International Dark Sky Park’s dark sky and excellent nature views were well preserved by the national level. Through this nature friendly and the efforts to maintain the environment, the park was designated as a Yeongyang Firefly Eco Park (International Dark Sky Park) on October 31, 2015.

2.2 IDA Contacts

- Contacts of Yeongyang Firefly Eco Park and current information
  - Name: Yeongyang Firefly Eco Park
  - Address: GyeongSangBuk-Do Yeongyang-Gun Subi-Myun Banditbulri-Ro 129
  - Contact: +82-54-680-5330~4
  - Area: 393ha
  - homepage: http://np.yyg.go.kr
  - Person in charge: Ecological park administration center, Kim GyeongHo
    Person in charge of International Dark Sky Park: Park Chan, astrosky@korea.kr

<Figure 2.1 Yeongyang International Dark Sky Park Information>
<Figure 2.2 Yeongyang Firefly Eco Park Designated Area>
2.3 Tier Status Upgrade Plans

After being designated as the Yeongyang Firefly Eco Park, many activities are in process to preserve the quality of the night sky and fireflies natural habitats.

The Yeongyang Firefly Eco Park Preservation Committee, which was organized in 2016, is planning not only the cleanup activity within the park but also starting an educational program in order to provide the information service for the visitors starting at end of 2017. The committee is also promoting programs such as firefly releasing event and making programs with the local residents to reduce light pollution and enhance natural purification.

Since 2016, the park is continuously replacing all the streetlamps which do not meet IDA criteria. In 2017, the Yeongyang Firefly Eco Park will replace lighting for the park maintenance entrance and the campground in front of the observatory pension. By 2025, all the streetlamps in the park will be completely replaced with the grant of approximately $40,000 from the city of Yeongyang.

Yeongyang-gun is making a tremendous effort to make the Yeongyang International Dark Sky Park as a wind power plant, a slow city and unpolluted area. Ordinances were enacted in 2016 to promote participation of the local residents in dark sky preservation activities. Recently, an animation production of the park is prepared to be shown in the theaters. Also, a promotional film is planned to release worldwide through IDA. With all these efforts, the Park serves as the leader of the leading area in Asia to protect the pristine environment and increases the value of sustainable use and clean environment conservation.

2.4 Park Visitors during Past Year

After it was designated as the Yeongyang Firefly Eco Park, a number of people who visited the Observatory and Dark Sky programs increased to 5,137 in 2015 from 4,859 (total charged and for free spectators) in 2014. Based on September, 2016, the first year of
designation, 7,557 people visited to enjoy the astronomical programs and use the facilities operated by the Yeongyang International dark Sky Park.

The total number of visitors by September, 2017 was 7,580. In the first year after the designation, a number of visitors from the age of 6 to 19 increased to 2,543 from 1,726 in 2015 and family visitors are continuously increasing. Yearly, over 10,000 visitors came to the Youth Training Center and Pension which are located in the International Dark Sky Park. With 2016 Yeongyang Dark Sky Starlight Tour, the visitors from the various classes are able to experience Korea’s beautiful dark sky.

<Table 2.1 Yeongyang Firefly Eco Park participants present situation of change, units : person>

<table>
<thead>
<tr>
<th>Year</th>
<th>Total audience (including free)</th>
<th>Charged audience</th>
<th>Adults</th>
<th>Teenagers (6-19)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>4,859</td>
<td>3,528</td>
<td>1,537</td>
<td>1,991</td>
<td>Before designation</td>
</tr>
<tr>
<td>2015</td>
<td>5,137</td>
<td>3,127</td>
<td>1,491</td>
<td>1,726</td>
<td>10.31 designated</td>
</tr>
<tr>
<td>2016</td>
<td>7,557</td>
<td>4,752</td>
<td>2,209</td>
<td>2,543</td>
<td>After designation</td>
</tr>
<tr>
<td>2017</td>
<td>7,580</td>
<td>4,237</td>
<td>2,330</td>
<td>1,907</td>
<td>Two years after designation</td>
</tr>
</tbody>
</table>
3. Park Lighting

3.1 Parks/Reserves

The Yeongyang International Dark Sky Park’s illumination is being promoted annually and in 2017, approximately $400,000 is being planned to use in replacement of the lamps to meet the IDA illumination criteria.

The zone of replacement will be the park maintenance entrance and the campground in front of the observatory pension and the design features should accord to suit the characteristic features of the area and will be replaced without disturbing the observation of the night sky.

Supplementation and replacement will take place this year in which out of whole range, 8 will be repaired or replaced and 4 will be completely changed according to the IDA lighting criteria.

<Table 3.1 Lamp replacement specification>

Title: Yeongyang character (Firefly), sculpture for street lamps, red pepper’s sculpture and other lighting lamps.

1. Scope of application and classification

1-1 Scope of application

These products are the characters of Yeongyang for the energy conservation project and lighting environment improvement project on roads or residential street. It is specially specified on the production, specifications and delivery of firefly sculpture, street(security) lamps and red pepper sculpture which is a representative goods in Yeongyang.

1-2 Classification 1(lightning fixture and sculpture of street lamps for roads and residential street)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Product name</th>
<th>Material</th>
<th>Reflector</th>
<th>Glauve</th>
<th>Special features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting fixture for roads and residential street</td>
<td>Energy conservation Sculpture(firefly) Street(security) lamps</td>
<td>Aluminium Diecasting and PC(polycarbonate, others)</td>
<td>High-purity aluminium Anodizing Electrolytic coating</td>
<td>Heat resisting glass</td>
<td>Ceramic metal halide lamp exclusive magnetic built-in stabilizer and connection included</td>
</tr>
</tbody>
</table>

1-3. Classification 2.(accessory lighting fixture of Yeongyang red pepper sculpture)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Product name</th>
<th>Material</th>
<th>Lamp</th>
<th>Driving system</th>
<th>Special features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road lighting fixtures Accessory material</td>
<td>Lighting fixtures for sculpture of Yeongyang red pepper</td>
<td>Aluminium gravity Sand casting and ABS</td>
<td>High fidelity POWER LED 3 W</td>
<td>220V AC driving system</td>
<td>LED LAMP 3W built-in and Connection included</td>
</tr>
</tbody>
</table>
<Figure 3.1 2 Drawings of lamp replacement specification>
<Figure 3.2 Lighting Change Site>
3.2 Communities

After the designation in 2015, the Yeongyang International Dark Sky Park is in process of establishing their role and lighting administration plans will be made according to IDA’s standards.

Also, these changes made provisions for indicators of ecological environment firefly habitats to be continuously managed and retained.

Yeongyang International Dark Sky Park operational and management ordinance

(Established) 2016.07.05 ordinance 2092
Managing Dept: Natural Ecological Park Management Office(Firefly Dept.)
contact: (54)680-5332

Article 1 (object) The object of this ordinance is to regulate the ordinance in order to preserve ecological environment from light pollution.

Article 2 (location) The location of Yeongyang International Dark Sky Park (Dark Sky Park) is a part of Yeongyang-gun Subi-myun Wang-Pi stream basin ecological conservation district including Yeongyang firefly ecological experience village district.

Article 3 (definition) The meaning of the terms in this ordinance is defined as below.
1. “Light pollution caused by artificial illumination (light pollution) conforms to #1 of Article 2.
2. “Exterior illumination” is artificial illumination installed outdoors.
3. “Shield” is blocking equipment which block lights that radiates to the top of the light source or besides illumination field.
5. “Kelvin (K)” means color temperature of lights followed by Framework Act on National Standards.

Article 4 (Range of application) The range of this ordinance is location where it is designated as the Dark Sky Park. However, if exterior illumination of nearby area affects the Dark Sky Park, the range could be expanded.

Article 5 (Tasks) Dark Sky Park conducts each task as below.
1. Management and operation.
2. Establishing illumination landscape management plans in order to prevent light pollution.
3. Annual report preparation and submission.
4. Research study and measurement of brightness at night.
5. Light pollution education.
6. Any other issues concerning the Dark Sky Park.
Article 6 (Responsibilities of governor of a county)
① Governor of a Yeongyang-gun (governor of a county) must establish and enforce the plans for prevention of light pollution. In addition, governor of a county must provide information concerning light pollution to local residents (residents).
② Residents must make an effort to prevent light pollution. At the same time, residents must cooperate with Yeongyang-gun’s (county) plans for the prevention of light pollution.

Article 7 (Establishing illumination management plan) The governor of a county must establish illumination landscape management plan including each clause below in order to preserve ecological landscape and dark sky from the light pollution.
1. Effective management of illumination
2. Appropriate range of lighting fixtures
3. Preservation of animal and plants by minimizing the influence of exterior illumination
4. Clause about annual illumination landscape management plan including the operational management which IDA is proposing.

Article 8 (Standards for installing exterior illumination) Governor of the county must install the exterior illumination based on the standards below in order to preserve ecosystems and dark sky.
1. The color temperature of illumination cannot exceed 4,000 K.
2. Every exterior illumination must install shields.
3. If the lights are necessary for the stadium or signs, the brightness must be minimized and must be able to control the lights by installing sensors and timers.
4. Standards for installing exterior illumination, depending on the usage, must follow the separate mark.

Article 9 (Standard of usage for exterior illumination)
① According to article 8, exterior illumination installed by the county should use reasonable level of lights depending on time and location.
② Hours of use for the public facilities inside the Dark Sky Park is 30 minutes after the sundown until 30 minutes before the sunrise.
③ Indoor illumination of public buildings must be completely blocked in 30 minutes after the sundown.

Article 10 (International cooperation intensification) Governor of a county must participate in preserving the dark sky from the exterior illuminations through international cooperation with IDA and International Dark Sky Park Preservation District.

Article 11 (Illumination installed by residents)
① Illumination installed before this ordinance will be considered as followed by the ordinance.
② Despite of section 1, when the residents replace or install the exterior illumination, expenses could be provided based on the Article 8.

Article 12 (Award) Based on the Yeongyang-gun’s award ordinance, governor of a county can award a prize to the organizations or individuals who contributed greatly in preventing light pollution.

Additional Clause <Ordinance 2092, 2016.7.5>
Enforcement of this ordinance starts from the day it proclaimed.

Figure 3.3 Yeongyang International Dark Sky Park operational and management ordinance, Established July 15, 2016
### Table 3.2 Installation criteria of outdoor lightings according to usage of B & r

<table>
<thead>
<tr>
<th>Classification</th>
<th>type</th>
<th>lamp</th>
<th>Brightness (lumen)</th>
<th>color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street lamp</td>
<td>FCO</td>
<td>LPS, HPS, CFL, LED</td>
<td>-</td>
<td>Yellow, amber, red</td>
</tr>
<tr>
<td>Signboard</td>
<td>Reverse reflex</td>
<td>LED</td>
<td>-</td>
<td>Yellow, amber, red</td>
</tr>
<tr>
<td></td>
<td>FCO</td>
<td>Incandescent lamp</td>
<td>CFL, LED</td>
<td>&lt; 500, Yellow, amber, red</td>
</tr>
<tr>
<td>Security lamp</td>
<td>FCO</td>
<td>Incandescent lamp</td>
<td>CFL, LED</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>FCO</td>
<td>Incandescent lamp</td>
<td>CFL, LED</td>
<td>&lt; 500, Yellow, amber, red</td>
</tr>
<tr>
<td>Garden lamp</td>
<td>FCO</td>
<td>Incandescent lamp</td>
<td>CFL, LED</td>
<td>&lt; 500, Yellow, amber, red</td>
</tr>
<tr>
<td>Parking lot</td>
<td>FCO</td>
<td>LPS, HPS, LED</td>
<td>&lt; 500</td>
<td>Yellow, amber, red</td>
</tr>
<tr>
<td>Road sign</td>
<td>Reflecti on type</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Glossary:**
- FCO: Full Cut Off (lamps that light do not spread in the upper direction)
- HPS: High Pressure Sodium (high pressure sodium lamp)
- LPS: Low Pressure Sodium (low pressure sodium lamp)
- CFL: Compact Fluorescent Lamps (small fluorescent lamp)
- LED: Light Emitting Diodes (light emitting diodes)
4. Sky Quality

4.1 Weather Impacts

Yeongyang-Gun is located in the highest part in GyeongSangBuk-Do. High mountains are located in North and low hills are located in South and annual average daily temperature rate is around 22.3 degree which is the typical mountain village climate. Yeongyang International Dark Sky Park is located in northeast part of Yeongyang-Gun and since it is close to the eastern coast of Korea, it is affected by the eastern coast as well as mountain village climate. Due to this geographical feature, the park area is often cloudy due to the oceanic climate and there are some limitations in measuring the brightness of night sky because of the seasonal influences.

![Figure 4.1] Yeongyang International Dark Sky Park’s location

4.2 Sky Quality Measurements

Sky Quality Measurements were made in the observatory by placing SQM, starting January 2015 and it measured the night sky quality
every day for a certain period time. However, due to the malfunction of SQM, measurement figures of May 2017 were excluded from the sky quality measurements.

Unihedron Sky Quality Meter with lens was used for the measurement.

(http://www.unihedron.com/projects/sqm-1)

[Figure 4.2 Sky Quality Chart VS IDSP Tier]
In the first year of Yeongyang International Dark Sky Protection Park, the average night sky in the observatory area was 21.56 in the year of 2015, and it was 21.16 in the first year after being designated as a dark sky park which proves the quality of the dark sky has improved.

The data from October 2016 to August 2017 show that the average measurement value is 21.59, indicating that the quality of the night sky has been maintained.

Looking at the brightness of the night sky, it is usually 21.82, 21.79, 21.86 corresponding to gold from June to August of summer. In winter, February is also 21.79, indicating that it maintains a very high quality night sky environment.

In March, April, and October, with the measurement of 21.19, 21.39, and 21.39 respectively, it showed lower quality than that of the whole. However, it indicated that it is maintaining the appropriate environment continuously because it is showing higher than silver.
grade which is the designated rate. Local resident’s interest in preserving the night sky and continuous environmental conservation activities are contributing greatly to maintain the clear dark sky.

<Table 4.1 Yeongyang International Dark Sky Park Site Sky Quality Measurements>

<table>
<thead>
<tr>
<th>DATE</th>
<th>SQM</th>
<th>DATE</th>
<th>SQM</th>
<th>DATE</th>
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<td>2016-10-02</td>
<td>21.29</td>
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<td>21.42</td>
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<td>21.65</td>
<td>2017-01-02</td>
<td>21.4</td>
<td>2017-02-02</td>
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</tr>
<tr>
<td>2016-10-03</td>
<td>22.16</td>
<td>2016-11-03</td>
<td>21.73</td>
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<td>2017-01-30</td>
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</table>

Average 21.31 Average 21.58 Average 21.52 Average 21.63 Average 21.79
<table>
<thead>
<tr>
<th>DATE</th>
<th>SQM</th>
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<td>21.75</td>
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</table>

| Average | 21.39 | Average | 21.19 | Average | 21.82 | Average | 21.79 | Average | 21.86 |
Yeongyang Firefly Eco Park in South Korea (The First IDSP in Asia)

2017 Annual Report to the International Dark-Sky Association 30 September 2017

Table 4.2 Annual mean (2016.10 – 2017.08)

<table>
<thead>
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<th>MONTH</th>
<th>SQM</th>
<th>Tier</th>
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<td>21.31</td>
<td>Silver</td>
</tr>
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<td>21.58</td>
<td>Silver</td>
</tr>
<tr>
<td>2016-12</td>
<td>21.52</td>
<td>Silver</td>
</tr>
<tr>
<td>2017-01</td>
<td>21.63</td>
<td>Silver</td>
</tr>
<tr>
<td>2017-02</td>
<td>21.79</td>
<td>Gold</td>
</tr>
<tr>
<td>2017-03</td>
<td>21.39</td>
<td>Silver</td>
</tr>
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<td>Silver</td>
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<tr>
<td>2017-06</td>
<td>21.82</td>
<td>Gold</td>
</tr>
<tr>
<td>2017-07</td>
<td>21.79</td>
<td>Gold</td>
</tr>
<tr>
<td>2017-08</td>
<td>21.86</td>
<td>Gold</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>21.59</td>
<td>Silver</td>
</tr>
</tbody>
</table>

Figure 4.4 Yeongyang International Dark Sky Park Site Sky Quality Measurements
4.3 Night Sky Photographs

In order to preserve the dark sky and to inform its importance, Yeongyang International Dark Sky Park held photo contest especially for the photogrammeter in nationwide during Sep. to Dec., 2016.

In this national photo contest for the designated commemoration of Yeongyang International Dark Sky Park, we received 377 photos which show International Dark Sky Park, landscape photography of dark sky and others. We set up an instrument for many people to recognize their attention and significance of the first International Dark Sky Park in Asia. We will do our best to promote Yeongyang city, its beautiful dark sky and natural environment to more people and also try to make a luxury tourist as ecological tourism resources for the domestic and foreign tourists.

<Figure 4.5 Photo of Yeongyang International Dark Sky Park>
<Figure 4.6 Photo of Yeongyang International Dark Sky Park>
<Figure 4.7 Photo of Yeongyang International Dark Sky Park>

<Figure 4.8 Photo of Yeongyang International Dark Sky Park Tour>
Yeongyang Firefly Eco Park in South Korea (The First IDSP in ASIA)

2017 Annual Report to the International Dark-Sky Association 30 September 2017

(Figure 4.11 Photo of Yeongyang Dark Sky)

(Figure 4.12 Photo of Yeongyang Dark Sky)
5. Conservation and Research

5.1 Climate and weather Data

Yeongyang International Dark Sky Park’s climate and weather data is on the web page (np.yyg.go.kr) based on the data collected from Andong weather station and Daegu weather station. Especially, firefly observatory offers starlight weather in order to show the night weather status to visitors so they won’t miss the observation.

This service was started in August 2016 from the date of the inquiry and it displays the night weather information for three days.
5.2 Progression of phenology data study

Wang-Pi stream basin ecological conservation district is a part of Yeongyang International Dark Sky Park. Around that area, variety of wild animals inhabit such as, otter, goat, falcon, wildcat, marten and many other endangered species.

To preserve this area, The Ministry of Environment designated this place as an ecological preservation area in 2015. In order to make Wang-Pi area as a UNESCO biosphere reserve, various studies concerning the preservation and the activities to restore the ecosystem damages started in 2012.

Also, through the information center, visitors can receive information on the limitation of activities, preservation method, restrictions on entrance to the mountains, and forest fire prevention.
Firefly ecological experience village was designated on April 26, 2005 and many preservation programs are in action.

Especially, firefly breed and diffusion studies are in progress at the observatory. Many studies are in progress in order to build firefly’s inhabitation environment.

Also, in order to sustain clean environment for the next generation, preservation studies are in progress.
5.3 Visiting IDA headquarters and Operational case study

Through continuous visit to the IDA headquarters, Yeongyang city is working on a program to exchange ideas and collaborate with the IDA headquarter to maintain the ideal environment standard of the United States and Europe.

From July 19 to July 31, 2017, three members, including the chief administrator and two chapter members of the Yeongyang Park visited the IDA headquarters in Tucson, USA to hold discussion time about the performance and future direction.

During this visit, the discussion was about views on various international activities, area expansion and effective utilization.

It served as a momentum in exchanging assorted opinions as a member of IDA and the international community.

Along with the visit to the IDA headquarter and the designated Dark Sky Parks in the USA,

various efforts were made for directional setting of Yeongyang through its benchmarking.

---

**Table 5.1 Summary of Operational case study & City**

<table>
<thead>
<tr>
<th>For business promotion, scheduled to visit IDA headquarters (Tucson, USA) and overseas designated cases</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Visiting overview of International Dark Sky Association and International Dark Sky Protection Park</strong></td>
</tr>
<tr>
<td>○ Visiting schedule</td>
</tr>
<tr>
<td>: July 19, 2017 - July 31, 2017 (10 nights and 13 days)</td>
</tr>
<tr>
<td>: traveling in the USA -1 day, in returning+1day, staying in the USA 11 days</td>
</tr>
<tr>
<td>○ Visiting area</td>
</tr>
<tr>
<td>: IDA headquarters in Tucson, Sedona, Big Park (DS Park)</td>
</tr>
<tr>
<td>: Flagstaff (DS Community), Arches canyon, Deadhorse Park (DS Park)</td>
</tr>
<tr>
<td>: Canyonlands (DS Park), Yellowstone NP, Grand Teton NP, Zion NP</td>
</tr>
<tr>
<td>- Listed above are the designated International Dark Sky Parks, National Parks and Ecological Parks with outstanding lighting at night)</td>
</tr>
<tr>
<td>○ Purpose of visit</td>
</tr>
<tr>
<td>: Consultation with the IDA on operation, exploring the best site to be designated and the best night lighting schemes</td>
</tr>
<tr>
<td>○ Visitors : Total of 5 (3 members from Yeongyang and 2 chapter members)</td>
</tr>
</tbody>
</table>
2. Main visiting places
   - Tucson: IDA headquarters
   - Sedona (DS Community): IDA Community Park (free tour of the designated area)
   - Grand Canyon (DS Park): Benchmarking operational cases
     (scheduled to meet the manager in charge)
   - PAGE: Tour Antelope Canyon & Horseshoe Bend
   - Monument Valley: Benchmarking Monument valley operational cases
   - Arches National Park: Deadhorse Park (DS Park) Designated area
   - Canyonlands (DS Park): Night sky with landscape lighting and National Ecological Park
   - Yellowstone National Park: World’s first national park
   - Tour Bryce Canyon National Park & Coral Pink Sands Dunes
   - Tour Zion National Park Via Palomar College
     - Interview with Scott Kadel, previous IDA Executive Director / Tour Palomar College
     - Astrology Observatory

---

The contents of the meeting with the IDA on business promotion

<table>
<thead>
<tr>
<th>Contents of meeting</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The scope to attach and promote the IDA logo on the products within the designated IDA Park</td>
<td>A positive review when annual report is proposed with a consideration of donation method, etc. Use of logo is not a problem for the product of the Yeongyang Dark Sky Park but the details of using the full logo of Yeongyang requires detailed planning and should notify the result through the board of directors of IDA headquarters.</td>
</tr>
<tr>
<td>2. Scope of application for local specialty products produced in other areas, and opinions on the part that should be consulted with the IDA when applying</td>
<td>If Yeongyang submits the 5-10 minute animation from the Ministry of Land, Infrastructure, Transport and Tourism to the IDA, Yeongyang can distribute them as promotional materials on the IDA homepage and the US astronomy area. However, copyright, language, and prior deliberation procedures are required and it should be in a completed form.</td>
</tr>
<tr>
<td>3. Promotion plan on the IDA homepage related to animation production which had been cooperated with the IDA when applying for the Ministry of Land, Infrastructure and Transport</td>
<td>- The IDA events are held throughout the year, but the IDA is centered around the US, which has many designated agencies. - Securing the number of participants when holding outside the US - Difficulties arise due to the cost (at their own expense) of participating and lack of presenters</td>
</tr>
<tr>
<td>4. Comments of the areas where Yeongyang, IDSP, can be held in relation to the annual events of IDA (IDA General Meeting, etc.)</td>
<td>In Europe, there are occasions where each chapter and park-designated city hosts its own meetings and symposiums, so if possible to hold regional meetings and symposia in consultation with chapters in the Asia region, it will be welcomed.</td>
</tr>
<tr>
<td>5. Gift Shop operation plan, etc.</td>
<td>- Most of the designated parks run gift shops, etc., and they focus on smaller items rather than large-scale items.</td>
</tr>
</tbody>
</table>
Yeongyang Firefly Eco Park in South Korea (The First IDSP in Asia)

2017 Annual Report to the International Dark-Sky Association 30 September 2017

Figure 5.4 visit IDA headquarters (Tucson, USA)
Yeongyang Firefly Eco Park in South Korea (The First IDSP in ASIA)

Annual Report to the International Dark-Sky Association 30 September 2017

Figure 5.5 visit IDA headquarters (Tucson, USA)
Especially, it was a great opportunity to learn in detail about the difficulties that occurred in Tucson Oracle Park and its changes after the IDA designation. Henceforth, there was a lot of progress for development proposal through corporative relations which could be mutually beneficial in becoming better partners.

(Table 5.3 Main Visit Results)

<table>
<thead>
<tr>
<th>Main Visit Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Visit Tucson Oracle State Park</td>
</tr>
<tr>
<td>◦ Discussing with the officials of the Oracle State Park, designated as IDA Park in Tucson District.</td>
</tr>
<tr>
<td>A closed State Park was changed to permanent park after the designation because of increased night program participants, increase in visitors of camping, local kindergarten, primary and middle school students.</td>
</tr>
</tbody>
</table>
Main Visit Results

Past Events

Updated: 22 July 2017

Since its formation in April 2014, the Oracle Dark Skies Committee has been attending various events around Oracle and Pinal County to work to have Oracle State Park designated as an “International Dark Sky Park”. The Committee also does public outreach on the effects of Light Pollution and how everyone can help reduce the problem and save money as well. Selected past events are mentioned here.

If you would like a Committee member to talk to your company, organization, or group of local residents, please contact Mike Weasner (520-634-3488) or mweasner@mac.com.

South Korean Dark Skies Delegation Visit, Oracle State Park, Friday, 21 July 2017

In January 2015, Oracle State Park hosted a South Korean Dark Skies Delegation Visit. They had wanted to see an IDA “International Dark Park” (IDSP) and learn what was required from a Park whose application had been successful. Their efforts resulted in Yeongyang Firefly Eco Park becoming an IDSP later in 2015.

On Friday, 21 July 2017, Oracle State Park once again hosted members of a Dark Skies Delegation, this time with members of the staff of Yeongyang Firefly Eco Park, Jung Young Kil, Professor Won Kil Jeong, from Deegu Hanny Un we called ‘David’, returned as the translator. Here is the historic Kansallis Ranch House and an Arizona Cardinal awaiting our guests.
Main Visit Results

2. Increasing interest in the night sky and pursuing various programs
   - Pursuing various programs that utilize the night sky around US national parks, the National parks in Utah region is mostly engaged in education and experience programs with IDA
   - National parks are designated as IDA park or community and in the case of national parks that have not been designated, they run programs through “star party”, centered on gift shops, and display and sell various products related to the night sky.

3. Visiting astronomy college Palomar College
   - Visiting Palomar College located in California
   - Through the Platinum Program, astronomical astronomy education is being conducted for various classes including kindergarten, elementary, middle school, and local residents centered in California.
   - It consists of more than one hour video education($6/person) and astronomical observation program($6/person), and settled as university profits.
5.4 Promote Starlight Ecotourism luxury branding business

- **Business Title**: Yeongyang Dark Sky Protection Park Starlight Ecotourism Luxury Branding
- **Purpose**: Detailed planning and business promotion using unique and creative items for Yeongyang Firefly Ecology Park

[Securing Ecotourism Infrastructure and Creating Brand Value of Starlight Tourism]

- **Business Contents**: Building distinctive bus stops, renovation of Ecological School, Build a campsite, Secure Greenhouse

![Figure 5.6 Business Content]

- **Benefits**
  - Promoting creative business through sustainable and stable management, it becomes a representative of eco-tourism destination in Korea
  - Maximizing regional economic growth potential through experience and expansion of tourism resources
- Expansion of leisure space and improvement of living conditions for local residents

- Expansion of residents’ income and creation of comfortable street environment by creating tourist infrastructure

**New landmark formation in North Kyeongbuk, Area where more variety of tourist products can be formed**

**Improve living conditions of local residents**

![Image](image1.png)

*Figure 5.7 Business Background and Expected Benefits*
5.5 2017 Yeongyang International Dark Sky Park Seminar

To present a new paradigm through diverse opinions and discussions in seminars related to the Dark Sky Protection Park

- Event Overview

  - 2017 Yeongyang International Dark Sky Park seminar and Special Meeting of Korean Astronomical Space Science Museum Association
  - Date: 2017. 9. 12. (Tuesday) ~ 9. 13. (Wednesday)
  - Place: Yeongyang Firefly Observatory and Natural Ecological Park Management Office
  - Participants: 50 people
  - Target Organization:

    - Korean Astronomical Space Science Museum Association/ Korean Astronomy Observatory and related organizations / Directors of the National Research Institute of Science Education/ Directors of the National Astronomical Observatory and Science Museums

  - Contents: Yeongyang International Dark Sky Park seminar / 2017 Production and demonstration of Digital film

*Figure 5.8 2017 Yeongyang International Dark Sky Park Seminar*
6. Funding

6.1 Secure self-funding

Financial resources are secured for environmental improvement in accordance with the lighting management plan of Yeongyang International Dark Sky Protection Park. These budgets are being used in illumination replacement when needed or when it is inappropriate.

As the first designated Park in Asia and a member of the international community, had programs to enhance the managers’ abilities through a variety of international activities and exploratory programs in similar regions. In addition, various publicity and experience programs in the region are being used to attract visitors from home and abroad.

We have programs that allow visitors to observe more vivid and various night skies by securing fund for the astronomical telescope replacement. Also, the funds have been secured for the cost of breeding to secure firefly population and to continuously maintain the habitat environment. Furthermore, various events with local residents are run through self-financing and efforts are being made to expand the good dark sky environment preservation, local publicity, convenience of visitors, and astronomical programs.

<table>
<thead>
<tr>
<th>Item</th>
<th>Funds(won)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>The cost of replacing the light in the protection park</td>
<td>39,000,000</td>
<td></td>
</tr>
<tr>
<td>Publicity Film Production Cost</td>
<td>14,000,000</td>
<td></td>
</tr>
<tr>
<td>IDA visit and operation tour</td>
<td>25,000,000</td>
<td></td>
</tr>
<tr>
<td>Firefly exploration and observatory events</td>
<td>15,000,000</td>
<td></td>
</tr>
<tr>
<td><strong>계</strong></td>
<td><strong>93,000,000</strong></td>
<td></td>
</tr>
</tbody>
</table>

※ 1$=1,100won
6.2 Securing business expenses through national and business partnerships

After the designation, Yeongyang has secured the national cost through a variety of eco-tourism and experience projects, regional landscape maintenance projects, and application for programs for publicity and education at the international level.

First of all, Yeongyang secured 3.2 billion won of national expenses through the Yeongyan Dark Sky Park in the local demand reduction project organized by the Ministry of Land, and from October of 2016, we have been able to promote various maintenance projects and replacement of lighting fixtures.

Also, an animation production cost of 420 million won will be secured which will be used as educational materials and promotional material for children’s night-time educational programs through an animation production contest with Yeongyang International Dark Sky Protection Park as spatial background. This project should be completed in June of 2017.

In addition, through cooperation with domestic and overseas lighting companies, organizations of the dark sky, eco-environmental conservation groups, and with continuous assistance in national support and funding, we will do our best to provide educational and experiential environments for preserving the most beautiful and clean dark sky environment in Korea and Asia.

<table>
<thead>
<tr>
<th>Item</th>
<th>Funds(won)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Transportation Department Grant</td>
<td>3,200,000,000</td>
<td>2016-2018(3year)</td>
</tr>
<tr>
<td>Animation education promotion video production cost</td>
<td>420,000,000</td>
<td>2016-2017(2year)</td>
</tr>
</tbody>
</table>

※ 1$=1,100won
7. Arts and Culture

7.1 Yeongyang Wild Vegetable Festival: Set up a Publicity Center for International Dark Sky Protection Park

At Yeongyang Wild Vegetable Festival, the main festival of Yeongyang, set up a publicity center to raise the image and participation of the Protection Park and to increase the awareness of Yeongyang Dark Sky park to the visitors at home and abroad.

In order to encourage participation of the children, various experiential programs such as solar observations and making of tree insect necklaces are operated to attract tourists with experience and contribute to the promotion of clean Yeongyang.

- Yeongyang International Dark Sky Protection Park Exhibition Hall
  - Designation and promotion of the night sky protection park using the background banners/ Publicity video screening
- Exhibition of Firefly Observatory Public Information Hall
  - Promote Firefly Observatory and Ecology School Operation Program/ Exhibition of the winners of the photo competition
- Experiential Learning Operation
  - Tree insect necklace making / Sun Observation (Observation of sunspot using a telescope)
7.2 2017 Firefly Experience Camp for Youth

This is an annual event for youths since the designation as a Firefly Ecological Experience Village District. During the camp, students can learn about the importance of the environment where fireflies can inhabit and by experiencing the clean nature, their interests will increase and contribute more to the city. Since 2016, by using the observatory, education to inform the importance of clean environment and seriousness of light pollution started.

<Table 7.1 Firefly Experience Camp overview>

- **Camp overview**
  - Date: June 14, 2017 - June 16, 2017 / 2nights 3days
  - Place: Yeongyang Youth Training Center
  - Number of Participants
    - Junior high school in Yeongyang, 7th grade, 80 (including teachers in charge)
  - Others: Students who received parental consent in the application form.

- **Main activities**
  - Community experience activities: experience walking on narrow country road, Unity athletic meet
  - Self-exertion experience activities: Challenge course experience
  - Nature experience activities: Observatory field study, Ecological forest experience
  - Service learning activities: Cleanup activities around Suha valley and ecological park
  - Others: Unification security lecture and drawing competition of local area, talent show, camp fire (candle ceremony)

- **Benefits**
  - Nurturing a sense of patriotism and security awareness through a variety of experiential activities
  - Strengthen personality, cultivate consideration and nurture importance of nature
  - Developing cooperation, cohesiveness, patience through self-help

<Table 7.2 2017 Firefly Experience Youth Camp>
<table>
<thead>
<tr>
<th>Section</th>
<th>First day (Meeting day)</th>
<th>Second day (Unity day)</th>
<th>Third day (Compassion day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:00 ~ 08:00</td>
<td>※ participant : Gather by 09:00 (Yeongyang pepper market square)</td>
<td>Wake up (Checking/Exercise)</td>
<td></td>
</tr>
<tr>
<td>08:00 ~ 09:00</td>
<td></td>
<td>Breakfast</td>
<td></td>
</tr>
<tr>
<td>09:00 ~ 10:00</td>
<td>Go to narrow country road (Bus)</td>
<td>“Patriotic, Unification security” Speech</td>
<td>Natural purification activities (Room cleaning)</td>
</tr>
<tr>
<td>10:00 ~ 11:00</td>
<td>Hiking through the narrow country road (healing path)</td>
<td>“Patriotic, Unification security” Writing / drawing contest</td>
<td>(Writing questionnaire and prizes) Ending ceremony</td>
</tr>
<tr>
<td>11:00 ~ 12:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00 ~ 13:00</td>
<td>Lunch (lunch box)</td>
<td>Lunch</td>
<td>Leave for Home</td>
</tr>
<tr>
<td>13:00 ~ 14:00</td>
<td>Hiking through the narrow road</td>
<td>Subdivision activities</td>
<td></td>
</tr>
<tr>
<td>14:00 ~ 15:00</td>
<td>Go to the training center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:00 ~ 16:00</td>
<td>Admission ceremony</td>
<td>Unity athletic event</td>
<td></td>
</tr>
<tr>
<td>16:00 ~ 17:00</td>
<td>Challenge course experience (F)</td>
<td>Survival game (M)</td>
<td></td>
</tr>
<tr>
<td>17:00 ~ 18:00</td>
<td></td>
<td>Talent show</td>
<td></td>
</tr>
<tr>
<td>18:00 ~ 19:00</td>
<td></td>
<td>Dinner</td>
<td></td>
</tr>
<tr>
<td>19:00 ~ 20:00</td>
<td>Observatory experience (Go to the Firefly Observatory)</td>
<td>Talent show &amp; Campfire</td>
<td></td>
</tr>
<tr>
<td>20:00 ~ 21:00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21:00 ~ 22:00</td>
<td></td>
<td>Time of fellowship</td>
<td></td>
</tr>
<tr>
<td>22:00 ~</td>
<td></td>
<td>Sleep</td>
<td></td>
</tr>
</tbody>
</table>
7.3 2017 Firefly Exploration Event

In 2017, the annual firefly exploration event, which is a representative image of the Yeongyang International Night Sky Protection Park, was held.

This event became the opportunity to promote the best night sky park in Korea by inviting about 1,000 people including local residents and domestic and overseas tourists to spread the image of “clean Yeongyang”. Also, by operating a program to experience fireflies that live only in beautiful night sky and clean environment, it increased image as an eco-tourism city.

In addition to the firefly exploration event, we also had various experience programs such as a beautiful galaxy constellation trip in the night sky park, a mysterious exploration of late glowing firefly in the firefly ecology park, a catching of sweetfish, a balloon fly, and a folk game experience. Through ecological explanations, the visitors were reminded of the importance of nature and for the hot summer days, watering space was provided for the family members to enjoy.

<Table 7.3 2017 Firefly Exploration Event>

<table>
<thead>
<tr>
<th>Event Information</th>
<th>Time</th>
<th>Place</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology School and Observatory</td>
<td>10:00~22:00</td>
<td>Firefly Ecology School Exhibition Hall</td>
<td></td>
</tr>
<tr>
<td>Sun Observation</td>
<td>10:00~16:00</td>
<td>Observatory observation room</td>
<td></td>
</tr>
<tr>
<td>Traditional Folk Game</td>
<td>10:00~18:00</td>
<td>Ecology School</td>
<td></td>
</tr>
<tr>
<td>Wood insect making</td>
<td>10:00~18:00</td>
<td>Ecology School study room</td>
<td></td>
</tr>
<tr>
<td>Sweetfish catching</td>
<td>15:00</td>
<td>Ecology park, sweetfish catching experience site</td>
<td></td>
</tr>
<tr>
<td>Firefly exploration</td>
<td>19:30~20:30</td>
<td>Ecological experience village area</td>
<td></td>
</tr>
<tr>
<td>Wish balloon flying</td>
<td>20:30</td>
<td>Ecological Park Pond</td>
<td></td>
</tr>
</tbody>
</table>
<Figure 7.2 Firefly Exploration Event>
7.4 Yeongyang Hot Festival “International Dark Sky Protection Park Promotion Hall

The “Yeongyang Hot Festival,” the largest festival in Yeongyang, is held annually in Seoul, the capital city of the Republic of Korea, and is an important event promoting Yeongyang.

For the first time at this event, we opened a promotion hall for the Natural Ecological Park Management Office, promoting youth training facilities, pensions, eco-schools and observatory, and promoted the beautiful Yeongyang International Dark Sky Park.

Firefly Exploration Overview
- Date: 2017. 9. 4 – 9. 6
- Place: Seoul City Hall Square
- Event Overview
  - Promote youth training facility, pension, firefly ecology school and observatory, and also promote the beautiful dark sky and clean Yeongyang

Main Activities
- Creating Experience Learning Program
- Exhibition of Yeongyang Dark Sky and Astronomical Photos
- Promote the International Dark Sky Park (Install status board, publicity video screening)
- Distribute promotional materials for the starlight ecotourism luxury business and also various events
- Distribution of promotion materials for the Natural Ecological Park Management Office and the Firefly Observatory

(Figure 7.3 2017 “International Dark Sky Park Promotion Center” during “Yeongyang Hot Festival”)
7.5 Production of Astro Gardner and Pluto

• Genre and Synopsis
  - A family-oriented global fantasy animation of a 12-year-old Suha and the Astro gardener, Omu, who came to Suha’s grandparent’s house in Suha-ri to find darkness in their journey.

• Planning intention and background
  - To inform the viewers of the night sky and clean nature of Yeongyang through their own content and not by a direct publicity
  - Unlike cultural festivals and traditional culture foods, it maximizes the strengths of clean ecological resources that are of value in modern society.
  - Through the two points of character and story, it informs domestic and overseas viewers, the natural resources of Yeongyang and raises awareness and favorability

• Concept
<Figure 7.4 Production of Astro Gardner and Pluto>
7.6 Miscellaneous Business

- Yeongyang Dark Sky Park booth at National Forest Management Convention

![Figure 7.5 Yeongyang Dark Sky Park booth at National Forest Management Convention](image)

- Targeting various fields, the importance of environmental protection and the sustainable protection of the beautiful night sky are promoted through publicity of the International Dark Sky Protection Park.
8. Community and Media Relations

8.1 Yeongyang International Dark-Sky Protection Park Council Activity

On February 23, 2016, the “Yeongyang International Dark-Sky Protection Park Council” centering on residents residing in the Yeongyang International Dark-Sky park area has been constructed to protect the night sky, protect the wildlife environment and preserve the clean natural environment so that everyone can visit the area to see the beautiful night sky.

Through the council, conveyed the importance of the night protection park to the surrounding area, and carried out various activities through tourists along with the environmental campaign around the park.

As a result, the awareness of the dark-sky park is increasing and voluntary activities of residents will play a role in maintaining a sustainable environment and delivering them to future generations.

<table>
<thead>
<tr>
<th>Table 8.1 Yeongyang International Dark Sky Park Council Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>① Perception awareness training on the importance of protecting the Dark-Sky Park</td>
</tr>
<tr>
<td>② Voluntary services to reduce the artificial light pollution</td>
</tr>
<tr>
<td>③ Volunteer activities to improve the environment around the dark-sky protection park.</td>
</tr>
<tr>
<td>④ Holding seminars with the local residents, public officials, legislators, urban planners, environment groups, astronomers and light industry representatives about the preservation of the Dark Sky Park.</td>
</tr>
<tr>
<td>⑤ Starlight festival and healing therapy program for the visitors</td>
</tr>
<tr>
<td>⑥ To obtain information and materials through the website, and to contribute to the protection park.</td>
</tr>
<tr>
<td>⑦ Experience programs and other projects related to dark-sky protection.</td>
</tr>
</tbody>
</table>
8.2 Various Media Reports

After being designated by IDA on October 31, 2015, various activities were carried out to protect the dark sky in Yeongyang, and while monitoring the US and European cities that best understand and practice IDA, we have visited various places in the US and have been making efforts to carry out different activities.

This year, second year of designation, we have been monitoring and promoting activities in diverse fields. The identity of the region is getting very high due to the promotion of park-led publicity and self-promotion activities in the surrounding area.

Especially, one of the major cable broadcaster TvN, ranked the park as the top 18th place to photograph the stars at night.

This broadcast ranking was not a publicity set up by Yeongyang, but rather selected by photographers and it is an index indicating that the interest in the Yeongyang International Dark Sky Protection Park is gradually increasing.
별빛들 별빛들을 보며 즐건한 경상북도 영양군

프리한19에서 추천하는 별빛을 즐기며 즐관을 즐기기 좋은 장소로 영양군의 별 Antar을 소개했다. 별이 떠나간다는 표현에 따르지 않는 gets.

영양군은 별을 볼 수 있는 장소를 만들기 위해 야간 조명을 줄이기 좋은 노력을 하였다. 그리고 나서 국제 밤하늘 보호 공원을 지정할 때 경상북도 영양군의 별 Antar과 별 Antar이 생태공원으로 지정되었다. 

경상북도 영양군 수비면, 아주면은 별 Antar을 즐기기 좋은 장소로 등장한다.
벌나는 별사진 촬영 방법

1. 스마트폰으로는 어렵다. 최소한 캠코더나 디지털카메라는 기본이다.
2. 세터속도는 15초~30초, ISO(감도)는 800~1600으로 설정한다.
3. 별사진은 흐리며 밤하늘에만 익숙한데로 카메라를 잠깐하며 고정후 찍는다.
4. 최신형 카메라는 "별사진 모드"로 설정하면 좋다.

**Figure 8.1 1 Free19, A Good place to take star photos:**

18th Yeongyang International Dark Sky Protection Park

[Astro Gardner and Pluto Press Release, 2017. 4. 27]
[Astro Gardner and Pluto Press Release, 2017. 4. 27]

서울일보

영양, 에니메이션 개발 중간보고회 개최

자유박물관센터 ’별빛별빛과 푸루토’ 개관

영양군 소방서 집행은 제 2017 영양

군별질환예방센터 개관에 앞서 ’별빛별빛과 푸루토’ 개관에 사전

회의를 개최하였다. 

2016년 집행과 협력한 개관식으로

한국의 방광상 숙박문화를 제도화

하고 있다. 방광상의 임무는 제도화의

YesungFirefly Eco Park In South Korea(The First IDSP in ASIA)

2017 Annual Report to the International Dark-Sky Association 30 September 2017
지구촌이 보호하는 ‘영양 밤하늘’

세계적 일보기 보호된 경복 영양군
자연환경 보존その他에 지구의 유역
변동변동 동전현장 옵스레드 가오
2015년 국제마블보호공원’ 지정
적숙 8월에 3886명 등 방문자이어

“문물 복원작업으로 국외문화유산공간 지
정으로 미래국유산작업에 발길다.”
경북 영양군 수리면 수리, 영양군이생
대포문 관리시설이 있는 곳이다. 관리자
토소에서 근무하는 직원들은 13일, “영양군
을 찾는 시람이 많기 때문에 많은 기간에
해 영양군의 관리가 필요하다.”
대표 기관에 충분한 보상금이 계상된
수수료로 인해 최근 영양군의 관리와
영양군의 관리기획에 대한 관심을 높이기
려하다.
영양군에 위치한 경복 영양군은 관광지
치이나 관광객을 위한 만물이생태
공원과 관련된 국제적으로도 인정받고
있는 만물이생태공원의 위치한 영양군
수리면 수리상제도 관리 유역 자원관리
조직에 경계 3886명이 2015년 10월 국제
마블보호공원(IDA)로부터 “국제마블보호
공원”으로 지정되었으며, 이는 최초로
IDA로 지정된 입성면은 단순히 일부
유역을 보호하는 것뿐이 아니라, 지구촌의
유목적인 관리와 지속가능한 관리가 상
당히 필요하다는 사례이다.

국제마블보호공원 지정 이후 영양
마블보호공원은 다양한 관광객과
마블보호공원 지정 이후 2015년 6월 14일에 지정된 이후 2
영양군의 관리자에 관계된 관광객이 지구
중유럽과 동양, 신기한 점이 있다. 지구
세계적 일보기 보호된 경복 영양군는
지구촌이 보호하는 ‘영양 밤하늘’

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Yeongyang Firefly Eco Park in South Korea (The First IDSP in ASIA)


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패색

[Dark Sky Protection Park Starlight Forecast Broadcasting 2017. 7. 20]

[영남]연합뉴스

2017.07.20

[영남]연합뉴스

[영남]연합뉴스

2017.07.20

2017 Annual Report to the International Dark-Sky Association 30 September 2017
권영택 영양군수 "방송사 별빛예보 상설화" 주문

18일 경북 영양군청 소회의실에서 열린 '인동문화방송 7월 시청자위원회' 회의에서 권영택 영양군수가 "열기예보에 별빛예보를 상설화해 주"를 주문하고 있다.(사진제공=영양군청)

"영양군이 아시아 최초 국제방향별빛보호공원에 지정된 것이 월계 지역의 일기 예보방송에 '별빛예보'를 해줄 것을 적극 검토해달라"

권영택 경북 영양군수가 18일 영양군청 소회의실에서 열린 '인동문화방송 7월 시청자위원회' 회의에서 방송사에 주문한 요청이다.

인동 MBC는 이달 오전 시청자위원, 문화방송 관계자 등 20여명이 참석한 가운데 시청자위원회를 갖고 프로그램 총성 관련 시청자의 목소리를 수렴했다.

이날 위원회의에서 권 군수는 영양군이 자연과 문화지원을 바탕으로 추진하고 있는 역량과 성과를 소개하고 지역발전을 위한 방송사를 적극적인 역할과 협조를 당부했다.

특히 권 군수는 "영양군이 아시아 최초 국제방향별빛보호공원에 지정된 것에 맞춰 지역의 일기 예보방송에서 '별빛예보'를 상설화 해야 한다"고 주문했다.

회의에 참석한 시청자위원과 방송사 관계자들은 영양군이 국제방향별빛보호공원에 지정된 것을 높이 평가하고 이를 지역 발전을 위한 운동으로 삼아야 한다는 데 의견을 같이했다.

시청자위원회는 영양군 홍보영상 시청, 권 군수의 연설, 프로그램에 대한 시청자위원의 의견과 방송사 측의 답변 순으로 진행됐다.

한편 시청자위원회는 시청자들의 권익 보호를 위해 매월 개최되며, 시청자위원은 프로그램 총성과 내용에 대한 방송사측의 의견을 전달하고 사전을 요구할 수 있다.

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여름이 사방을 감싸는 순간 하늘에서 별이 쏟아진다

"별한지" 영명 국제별하늘행복공원

여름 밤, 기적같이 '별한지'를 찾는 것만으로도 나를 흔들며, 더욱 대단한 '별의 세계'를 머리에 들을 수 있다. '별한지'는 천문학의 한계를 넘어서, 우리를 꿈꾸는 하늘을 새롭게 꿈꾸는 곳이다. 이곳은 자연을 사랑하는 모든 사람들의 푸른 꿈을 현실로 만들어 준다. '별한지'는 자연과 함께하는 천문대 및 관광지로, 천체관찰과 관광을 즐길 수 있는 곳이다.

여름 밤에 '별한지'를 찾는 것은, 우리를 허공으로 올리고, 우리를 꿈꾸는 하늘을现实으로 만들어 준다. 이곳은 천문대 및 관광지로, 천체관찰과 관광을 즐길 수 있는 곳이다.

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기압·반딧불이가 반기는 보석같은 계곡

일정 요약 적시 영영 속시계곡

전해받은 영한전해에 따르면, 태어난날부터 대한민국의 인디스피어에서 가장 오래된 영동과 남한강이 만나며, 이곳에 분산되어 있는 요정이 사는 곳으로, 이곳에선 다양한 생태계가 있고, 또한 이곳에선 다양한 민속의 전승이 이루어지고 있습니다.

요정의 전설에 따르면, 이곳은 태어난날부터 대한민국의 인디스피어에서 가장 오래된 영동과 남한강이 만나며, 이곳에 분산되어 있는 요정이 사는 곳으로, 이곳에선 다양한 생태계가 있고, 또한 이곳에선 다양한 민속의 전승이 이루어지고 있습니다.

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Yeongyang Firefly Eco Park in South Korea (The First IDSP in ASIA)

[Firefly Experience Event, 2017. 8. 14]

CJ헬로비전 2017.08.14

‘반딧불이 체험 행사’ 26일 영양에서 열려

자치행정(관내경 기자)

자연속에서 반딧불이를 관찰할 수 있는
반딧불이 체험 행사가 오는 26일
영양군 자연생태공원 일대에서 열립니다.

행사 당일 낮에는 민속놀이와
온어 잡기 체험 등이 진행되고
해가 갈수록 반딧불이 탐사과
소원 통신 날리기 행사가 열립니다.

참가자를 원하는 경우 현장에서 바로 신청하면 되며,
자세한 사항은 영양군 자연생태공원
관리사업소로 문의하면 됩니다.

▶ 가장 빠르고 정확한 영남 지역 소식은?

CJ헬로비전 영남방송 채널 25번
[이슈투데이 영남] 월~금 오전 2시, 우리지역 이슈 토크
[헬로TV뉴스 영남] 매일 저녁 7시, 영남 지역 대표 종합뉴스
'영남반딧불이 탐사행사' 성황리 개최

영남반딧불이 탐사행사, 2천여명 참여 성황리 개최

지난 26일 영남군 가천대생태공원 탐사행사에서 반딧불이 탐사 행사가 성황리에 개최됐다. 영남군 및 의
지 관광객 2천여명이 참여해 다양한 체험을 즐기며 가을공의 가을과 야행 채열을 보였다.

반딧불이 탐사 행사에는 반딧불이 체험은 물론 반딧불이 탐사와 함께 관광객들은

'영남반딧불이 탐사행사' 성황리 개최

영남군은 지난 26일 영남군 가천대생태공원에서 '반딧불이 탐사행사'가 성황리에 개최됐다고 28일 전했다.

이번 행사는 영남군과의 광관협력과 영남공원의 협력으로 열리며, 가을공의 가을과 야행체험을 결

특히, 첫 번째 7시 30분부터 진행된 어린 체험은 반딧불이 탐사 행사는 어린이 체험

2017 Annual Report to the International Dark-Sky Association 30 September 2017

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Since its formation in April 2014, the Oracle Dark Skies Committee has been attending various events around Oracle and Pinal County to talk about its work to have Oracle State Park designated as an "International Dark Sky Park". The Committee also does public outreach on the effects of Light Pollution and how everyone can help reduce the problem and save money as well. Selected past events are mentioned here.

If you would like a Committee member to talk to your company, organization, or group of local residents, please contact Mike Weasner (520-289-3402 or mweasner@mac.com).

South Korean Dark Skies Delegation Visit, Oracle State Park, Friday, 21 July 2017

In January 2015, Oracle State Park hosted a South Korean Dark Skies Delegation Visit. They had wanted to see an IDA "International Dark Sky Park" (IDSP) and learn what was required from a Park whose application had been successful. Their efforts resulted in Yeongyang Firefly Eco Park becoming an IDSP later in 2015.

On Friday, 21 July 2017, Oracle State Park once again hosted members of a Dark Skies Delegation, this time with members of the staff of Yeongyang Firefly Eco Park, including the Manager of Yeongyang Firefly Eco Park, Jung Young Kil. Professor Won-Kil Jeong, from Daegu Haany University, who we called "David", returned as the translator. Here is the historic Kannally Ranch House and an Arizona Cardinal awaiting our guests:
As the delegation left Oracle State Park we stopped by the Main Gate sign.

Everyone agreed that their visit was enjoyable and that Yeongyang Firefly Eco Park and Oracle State Park should someday become "Sister Parks" due to the similarities in their missions.

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URL = http://www.weasner.com/ODSC/events/OSP_072117/index.html