《生物》試題評析/命中事實

命題說明

1.對於第 12 題，作爲一個 model system 的生物所具備的條件，題目並未指出必須是 small size，*Arabidopsis* 是因(1) genome 小 (2) short generation (3) genome 已經定序完成等條件下，才是一個發生學上及遺傳學上的 model organism。(可查閱 Campbell (2005) p.413)
故答案應可增列(D)

2.對於第 52 題，此題來自 Campbell (2003)，考的是〝Wobble 的概念〞，其中的(C)亦是原因之一，因爲 tRNA 的 I 可與 mRNA 的 G.C.U or A 配對，亦可說明了爲何 tRNA 的數目不及 mRNA codons 的數目，故答案應爲(E)。

試題評析

1.此份試題比去年容易，仍以 campbell 爲出題藍本；另外 Starr. Mader 的內容亦有命題，足見命題者的用心。
2.講義幾乎都有，不好高騖遠，腳踏實地讀講義的同學應該可以考到理想的分數。
3.考古題佔的比例很大，例如：生物放大，Standing crop biomass,以及演化的方法、乙烯的三重反應…等題目，總復習皆復習了，本班生應可大獲全勝。當然 Campbell 題庫功不可沒。
4.遺傳考 5 題，分生高達 13 題，此兩項佔掉了 30%（去年 22%）。
5.動物生理考 17 題，佔 26%（去年 16%）。
6.植物學與去年相同佔 12%。
7.生態、分類、演化，分數略降，呈常態分佈。無地質學等刁鑽題目。
8.時勢題（火蟻）每年幾乎都會考一題。
9.今年多了台灣地區保護區的本土保育題，這也是該注意的新趨勢。

講義命中事實

曾正老師

題號	回數	頁數	題號	回數	頁數
1	第 3 回	P28	34	第 15 回	P212
2	第 4 回	P84、P149	35	第 3 回	P96～P98
3	第 4 回	P28	36	第 13 回	P61～P63
4	第 5 回	P138	37	第 2 回	P64～P65
5	第 7 回	P163、P164	38	第 3 回	P180
6	第 7 回	P219、P221	39	第 14 回	P85
7	第 7 回	P34、P35	40	第 8 回	P185、P186、P188
8	第 7 回	P93、P94	41	第 8 回	P154
9	第 8 回	P162	42	第 12 回	P1～P3
10	第 11 回	P132	43	第 8 回	P38
11	第 7 回	P34、P35、P36、P38	44	第 5 回	P234
12	第 18 回	P91、P92	45	第 18 回	P45
13	第 15 回	P93	46	第 10 回	P64、P78
14	第 13 回	P232	47	第 3 回	P199
15	第 15 回	P169	48	第 11 回	P158
16	第 3 回	P111	49	第 7 回	P81
17	第 5 回	P194	50	第 4 回	P33
18	第 13 回	P124～125	51	第 7 回	P87、P88
19	第 2 回	P52	52	第 5 回	P131
20	第 3 回	P169、P170	53	第 5 回	P128、P131、P135
21	第 4 回	P30	54	第 5 回	P140
22	第 5 回	P226	55	第 17 回	P39
23	第 14 回	P17	56	第 5 回	P1～P21
24	第 14 回	P51	57	第 17 回	P6～P7
25	第 19 回	P121	58	第 19 回	P171
26	第 13 回	P37、P38	59	第 19 回	P199
27	第 16 回	P129、P130	60	第 19 回	P203、P204 上課補充
29	第 19 回	P20	61	第 19 回	P196
30	第 19 回	P165	62	第 15 回	P113
31	第 15 回	P30、P31、P33	63	第 19 回	P258
32	第 15 回	P19	64	第 19 回	P226
33	第 15 回	P178	65	第 19 回	P226

講義命中事實

楊老師

題號	回數	頁數	題號	回數	頁數
1	第 3 回	P42→第 7 行	32	第 3 回 第 12 回	P134→第 8 行 P68→第 10 行
2	第 4 回	P107→第 15 行	33	第 12 回	口訣：莖→粗、緩、水平
3	第 4 回	P78→第 13 行	34	第 12 回	P148→第 4 行
4	第 5 回	P88→第 1 題命中	35	第 3 回	P91
5	第 7 回	P26→第 10 行	36	第 5 回	P150
6	第 7 回	P20→第 2 題命中	37	第 2 回	P37→第 19 行
7	第 6 回	P225→第 1 題命中	38	第 4 回	P56→第 11 題命中
8	第 6 回	P9→第 17 行 P10→第 1，2 題類似	39	第 12 回	P96→第 4 題完全命中
9	第 7 回	P149→第 17 行 P150→第 3 題類似	40	第 7 回	P144→第 10 行
10	第 7 回	P233→第 8 行	41	第 7 回	P147→第 1 行
11	第 6 回	P263→第 9 行	42	第 7 回	P129→第 14 行
12	第 8 回	P191→第 23 行	43	第 7 回	P95→第 20 行
13	第 12 回	P64→第 7、13~20 行	44	第 5 回	P182→第 13～20 行
14	第 10 回	P85→第 5 題命中	45	第 8 回	P253→第 1 題命中
15	第 12 回	P118、125→第 16~24 行 P141→第 7 題類似	46	第 8 回	P220
16	第 3 回	P132→第 7 行 P127→第 21 題類似	48	第 7 回	P175→第 1 題類似
18	第 5 回	P118→第 19 行	49	第 6 回	P249→第 1 題完全命中
19	第 2 回	P25→第 26 行	50	第 6 回	P190→第 11 題類似
20	第 4 回	P33→第 32 題命中	51	第 6 回	P231
21	第 4 回	P91→第 2 題類似	52	第 5 回	P65→第 17～ 行
22	第 5 回	P78→第 12~13 行	53	第 5 回	P88
23	第 10 回	P19→第 2 題完全命中	54	第 5 回	P84→第 13 行
24	第 10 回 第 12 回	P32→第 13 行 P117→第 2 題類似	55	第 5 回	P81→第 9 題命中
25	第 9 回	P92→第 28 行 P93→第 2 題命中	56	第 5 回	P1～2
26	第 10 回	P145→第 14 行	57	第 5 回	P218
27	第 10 回	P168→第 8 行	58	第 11 回	P73→最後 1 行
28	第 10 回	P179→第 10 行	59	第 11 回	P108→第 3 題命中
29	第 9 回	P44→第 10 行 P44→第 1、2 題完全命中	61	第 1 回	P27→第 8 行
30	第 11 回	P71→上課破題筆記 （交互作用模式假說）	62	第 11 回	P91→第 4 行
31	第 12 回	P10→table	63	第 11 回	P24

《生物》

I.【單選題】1-30 題，每題 1 分，共計 30 分。答錯一題倒扣 0.25 分，倒扣至本大題零分爲止，未作答時，不給分亦不扣分。

(D) 1. Which of the following metabolic pathways is common to both aerobic and anaerobic processes of sugar breakdown?
(A) the Krebs cycle
(B) the electron transport chain
(C) conversion of pyruvic acid to lactic acid
(D) glycolysis
(E) conversion of pyruvic acid to acetyl CoA

(A) 2. The recombination frequency between gene B and gene C is 11%. The recombination frequency between gene B and gene D is 5%. The recombination frequency between gene C and gene D is 15%. What would be the arrangement of these genes on a linkage map?
(A) DBC (B) CDB (C) BCD
(D) DCB (E) More information is needed

(E) 3. What is the key to the recognition of codominance?
(A) The phenotype of the heterozygote falls between the phenotypes of the homozygotes.
(B) The trait exhibits a continuous distribution.
(C) The alleles affect more than one trait.
(D) The dominant allele is not always expressed.
(E) The heterozygote expresses the phenotype of both homozygotes.

(E) 4. What is the correct order of the stages of translation?
(A) initiation, peptide bond formation, translocation, codon recognition, termination
(B) initiation, peptide bond formation, codon recognition, translocation, termination
(C) initiation, codon recognition, translocation, peptide bond formation, termination
(D) initiation, translocation, codon recognition, peptide bond formation, termination
(E) initiation, codon recognition, peptide bond formation, translocation, termination

(A) 5. During negative pressure breathing, _____.
(A) the diaphragm moves downward and the rib muscles contract, increasing the size of the chest cavity and decreasing the air pressure within the chest cavity
(B) you suck in air

(C) the diaphragm and rib muscles contract, decreasing the size of the chest cavity and increasing the pressure within the chest cavity

(D) the diaphragm moves downward and the rib muscles relax, increasing the size of the chest cavity and decreasing the air pressure within the chest cavity

(E) an increase in air pressure within the lungs draws air in

(B) 6. Why do cigarette smokers cough more than most people do?

(A) The tar in cigarette smoke tends to make alveoli stick closed. Coughing opens them.

(B) Coughing is the respiratory system's attempt to clear itself of the toxins found in smoke.

(C) Cigarette smoking partially paralyzes the lungs; coughing exchanges the resultant "dead air".

(D) Coughing stimulates blood flow to the lungs.

(E) By raising the pressure in the lungs, coughing forces more oxygen into the blood.

(E) 7. Which of the following substances does a cytotoxic T cell secrete to destroy a target cell?

(A) interferon (B) complement (C) antibodies

(D) pyrogen (E) perforin

(D) 8. Which of the following structures does not develop from mesodermal tissue?

(A) muscles (B) kidneys (C) heart

(D) nervous system (E) All of these develop from mesoderm.

(C) 9. During muscle contraction, within a sarcomere the _____.

(A) thin filaments get thicker

(B) thick filaments move closer together

(C) Z lines move closer together

(D) thick filaments get thicker

(E) Z lines move closer to the plasma membrane

(E) 10. Which, if any, of the following types of personal characteristics is not based in the cerebral cortex?

(A) reasoning abilities (B) mathematical abilities (C) artistic talents

(D) personality traits (E) All of the choices are based in the cerebral cortex.

(C) 11. The function of CD4 and CD8 is to assist T cells in

(A) enhancing secretion of proteins such as interferon.

(B) activating B cells and other T cells.

(C) binding of the MHC-antigen complex.

(D) recognition of self cells.

(E) secretion of antibodies specific for each antigen.

(D E) 12. *Arabidopsis* is the first plant to have its entire genome sequenced and acts as a model system for plant biologist. Which of the following characteristics is (are) the attribute(s)?

(A) tiny genome (B) a short generation (C) small size

(D) A and B (E) all of the above

(B) 13. Phoem translocates its sap from sugar sources to sugar sinks. Which of the following would **not** normally function as a sink?

(A) shoot tips (B) mature leaves (C) fruits

(D) growing roots (E) stems

(B) 14. Mycorrhizae is the mutualistic association between_____and _____.

(A) roots , algae (B) roots , fungi (C) algae , fungi

(D) roots , lichen (E) algae , lichen

(C) 15. Which hormones has been shown to trigger stem elongation, fruit growth, and seed germination?

(A) auxin (B) cytokinin (C) gibberellin

(D) abscisic acid (E) ethylene

(C) 16. Plants that fix CO_2 into organic acids at night when the stoma are open and carry out the Calvin cycle during the day when the stoma are closed are called

(A) C_3 plants. (B) C_4 plants. (C) CAM plants.

(D) all of the above (E) none of the above

(B) 17. Which of the following is not considered the final product of the expression of a gene?

(A) a polypeptide chain (B) an mRNA molecule (C) a tRNA molecule

(D) an rRNA molecule (E) snRNA molecule

(B) 18. Which of the following viruses is a DNA virus?

(A) Tobacco mosaic virus (B) Adenovirus (C) Influenza virus

(D) Retrovirus (E) Picornavirus

(B) 19. Peroxisomes

(A) photosynthesize.

(B) produce hydrogen peroxide.

(C) are not enclosed by a membrane.

(D) synthesize steroids.

(E) contain plastids.

(C) 20. Which of the following stages in mitotic cell division reveals centromeres uncouple, sister chromatids are separated, and the two new chromosomes move to opposite poles of the cell?

(A) telophase (B) prophase (C) anaphase

(D) metaphase (E) prometaphase

(B) 21. The impact of a single gene on more than one trait is called

(A) incomplete dominance. (B) pleiotropy. (C) codominance.

(D) polygenic inheritance. (E) blending inheritance.

(B) 22. Which of the following is an explanation of why a single gene may code for more than one polypeptide?

(A) protein degradation

(B) alternative RNA splicing

(C) genetic differentiation

(D) addition of 5'-caps and poly(A) tails

(E) signal peptides target to polypeptides

(B) 23. The dominant stage of mosses is the

(A) sporophyte. (B) gametophyte. (C) pollen.

(D) ovule. (E) none of the above

(D) 24. The male gametophyte of a conifer is represented by which of the following?

(A) sperm (B) spore (C) pollen tube

(D) pollen grain (E) none of the above

(E) 25. When using a cladistic approach to systematics, which of the following is considered most important for classification?

(A) the degree of evolutionary divergence.

(B) analogous primitive characters.

(C) shared primitive characters.

(D) overall phenotypic similarity.

(E) shared derived characters.

(C) 26. Which of these prokaryotes are most likely to be found in the immediate vicinity of active deep-sea vents?

(A) aerobically respiring bacteria

(B) bacteria adapted to being embedded in ice

(C) archaea

(D) N_2-fixing root nodule bacteria

(E) cyanobacteria

(D) 27. What are the most abundant and diverse vertebrates?

(A) birds (B) mammals (C) reptiles

(D) bony fishes (E) amphibians

A 28. Which of the following are the only modern animals that may have descended directly from dinosaurs?

(A) birds (B) lizards (C) snakes

(D) crocodiles (E) mammals

(A) 29. The smallest biological unit that can evolve over time is

(A) a population. (B) a cell. (C) an ecosystem.

(D) a community. (E) an individual organism.

(E) 30. Which of the following statements about "community" is **incorrect**?

(A) Community is the biotic section of an ecosystem.

(B) A community can be defined as any assemblage of populations in an area.

(C) A botanist may use 'plant community' to describe the composition of plant species in a specific habitat.

(D) Community ecology emphasizes the interactions between different species.

(E) Community functions as an integrated unit.

II.【單選題】31-65 題，每題 2 分，共計 70 分。答錯一題倒扣 0.5 分，倒扣至本大題零分爲止，未作答時，不給分亦不扣分。

(D) 31. Which of the following is **incorrectly** paired with its structure and function?

(A) xylem-a kind of vascular tissue that transports water and minerals

(B) phloem-a kind of vascular tissue that transports sugar

(C) periderm-protective coat of woody stems and roots

(D) pericycle-waterproof ring of cells surrounding central stele in roots

(E) fiber-a kind of sclerenchyma cell with secondary walls

(D) 32. Xerophytes have evolutionary adaptations that reduce transpiration. Which of the following is not the adaptation?

(A) multiple-layered epidermis

(B) thick cuticle

(C) stomata concentrated on the lower leaf surface

(D) trichome concentrated on the upper dermal tissue

(E) fix CO_2 as CAM pathway

(B) 33. Botanist found that ethylene could induce triple response in pea seedlings. Which of the following characteristics is **not** the effect caused by ethylene?

(A) a slowing of stem elongation

(B) a slowing of root elongation

(C) a curvature that causes stem to grow horizontally

(D) a thickening of the stem

(E) none of the above

(A) 34. How might a plant respond to severe flooding?

(A) It increases ethylene production which causes apoptosis in root cells.

(B) It increases the proportion of unsaturated fatty acids in cell membranes to reduce their fluidity.

(C) It reduces transpiration and closes the stomata.

(D) It produces heat-shock proteins that may protect the plant's proteins from denaturing.

(E) It orients leaves toward the sun to increase evaporative cooling.

(A) 35. Which of the following sequences correctly represents the flow of electrons during photosynthesis?

(A) H_2O → NADPH → Calvin cycle

(B) H_2O → photosystem I → photosystem II

(C) NADPH → chlorophyll → Calvin cycle

(D) NADPH → eletron transport chain → O_2

(E) NADPH → O_2 → CO_2

(C) 36. During conjugation between Hfr cell and an F^- cell, what happened?

(A) All the F^- cells become Hfr cells.

(B) All the F^- cells become F^+ cells.

(C) Genes from the Hfr cell may replace genes of the F^- cells by recombination.

(D) The chromosome of the F^- cell is completely replaced by the chromosome of the Hfr cell.

(E) DNA from the F^- cell transfers to the Hfr cell and DNA from the Hfr cell transfers to the F^- cell.

(C) 37. Which of the following is not the function of microtubules?

(A) Maintenance of cell shape

(B) Cell motility

(C) Muscle contraction

(D) Chromosomes movements in cell division

(E) Organelle movements

(A) 38. Crossing-over occurs during which phase of meiosis?

(A) prophase I (B) anaphase I (C) telophase I

(D) prophase II (E) metaphase II

(E) 39. Angiosperms are the most successful terrestrial plants. This success is due to all of the following **except**

(A) reduced gametophyte.

(B) fruits enclosing seeds.

(C) xylem with vessels.

(D) animal pollination.

(E) sperm cells with flagella.

(B) 40. Which of the following distinguishes cardiac muscle from both smooth and skeletal muscle?

(A) Its cells contract.

(B) Its cells are branched.

(C) Its cells are striped.

(D) It generally cannot be contracted at will.

(E) It generally can be contracted at will.

(D) 41. In the sarcomeres of skeletal muscle fibers, Ca^{2+} binds to a site on the

(A) Z line. (B) myosin head. (C) thick filament.

(D) thin filament. (E) neuromuscular junction.

(A) 42. Which of the following receptors is **incorrectly** paired with its category?

(A) cone-deep-pressure receptor

(B) rod-photoreceptor

(C) muscle spindle-mechanoreceptor

(D) hair cell-mechanoreceptor

(E) gustatory receptor-chemoreceptor

(E) 43. Where along the kidney tubule is glucose reabsorbed from the filtrate back into the blood?

(A) Bowman’s capsule (B) distal tubule (C) collecting duct

(D) loop of Henle (E) proximal tubule

(B) 44. Which of the following statements is true about control mechanism in eukaryotic cells?

(A) Lampbrush chromosomes are areas of active tRNA synthesis.

(B) Methylation of DNA may cause inactivity in part or all of a chromosome.

(C) Histone acetylation may inhibit gene expression.

(D) Eukaryotic genes are organized in large operon systems.

(E) Active gene transcription occurs in the heterochromatic regions of the nucleus.

(A) 45. Which of the following genes establishes the overall anterior-posterior axis of the embryo?

(A) bicoid gene (B) gap genes (C) pair-rule genes

(D) segment-polarity genes (E) homeotic genes

(B) 46. The yolk sac of humans _____.

(A) stores nutrients to support the developing embryo

(B) is evidence of humans' relationship to egg-laying vertebrates

(C) secretes HCG

(D) absorbs nutrients from, and releases waste to, the mother's blood

(E) envelops the developing fetus

(C) 47. What is the function of the polar bodies that are produced during oogenesis?

(A) They are the mechanism that allows for the shedding of excess cytoplasm during the production of a haploid ovum.

(B) They are the mechanism that allows for the shedding of excess nutrients during the production of a haploid ovum.

(C) They are the mechanism that allows for the shedding of excess genetic material during the production of a haploid ovum.

(D) They are the mechanism that allows for the shedding of excess mitochondria during the production of a haploid ovum.

(E) They are the mechanism that allows for streamlining of the ovum so as to facilitate the penetration of an ovum by a sperm.

(B) 48. Which of the following effects could result from activation of the sympathetic nervous system?

(A) decreased blood pressure

(B) decreased heart rate

(C) decreased rate of digestion

(D) constriction of the bronchi

(E) decreased rate of breathing

(C) 49. The clonal selection theory implies that

(A) related people have similar immune responses.

(B) antigens activate specific lymphocytes.

(C)only certain cells can produce interferon.

(D) memory cells are present at birth.

(E) the body selects which antigens it will respond to.

(B) 50. A transfusion of type A blood given to a person who has type O blood would result in

(A) the recipient's B antigens reacting with the donated anti-B antibodies.

(B) the recipient's anti-A antibodies clumping the donated red blood cells.

(C) the recipient's anti-A and anti-O antibodies reacting with the donated red blood cells if the donor was a heterozygote (Ai) for blood type.

(D) no reaction because type O is a universal donor.

(E) no reaction because the O-type individual does not have antibodies.

(D) 51. Why can normal immune responses be described as polyclonal?

(A) Blood contains many different antibodies to many different antigens.

(B) Construction of a hybridoma requires multiple types of cells.

(C) Multiple immunoglobulins are produced from descendants of a single B cell.

(D) Diverse antibodies are produced for different epitopes of a specific antigen.

(E) Macrophages, T cells, and B cells all are involved in normal immune response.

(E) 52. There are 61 mRNA codons that specify an amino acid, but only 45 tRNAs. This is best explained by the fact that

(A) some tRNAs have anticodons that recognize two or more different codons.

(B) the rules for base pairing between the third base of a codon and tRNA are flexible.

(C) inosine can hydrogen-bond with G, C, U or A.

(D) A and B are true.

(E) A, B, and C are true.

(E) 53. As a ribosome translocates along an mRNA molecule by one codon, which of the following occurs?

(A) The tRNA that was in the A site moves into the P site.

(B) The tRNA that was in the P site moves into the A site.

(C) The tRNA that was in the P site moves to the E site and is released.

(D) The tRNA that was in the A site departs from the ribosome.

(E) Both A and C are correct.

(E) 54. What are polyribosomes?

(A) ribosomes associated with more than one tRNA

(B) aggregations of vesicles containing ribosomal RNA

(C) multiple copies of ribosomes found associated with giant chromosomes

(D) ribosomes containing more than two subunits

(E) groups of ribosomes reading the same mRNA simultaneously

(C) 55. Why is it difficult to get bacteria to express genes directly from eukaryotic DNA?

(A) Eukaryotic genes are not transcribed in a single transcript.

(B) Eukaryotic genes do not contain enhancer sequences.

(C) Eukaryotic genes contain introns.

(D) Eukaryotic genes lack controlling regions.

(E) Eukaryotic genes may contain transposons.

(C) 56. The following scientists made significant contributions to our understanding of the structure and functions of DNA:

I. Avery, McCarty, and MacLeod

II. Chargaff

III. Hershey and Chase

IV. Meselson and Stahl

V. Watson and Crick

Place the scientists' names in the correct chronological order, starting with the oldest contribution.

(A) V, IV, II, I, III (B) II, I, III, V, IV (C) I, II, III, V, IV

(D) I, II, V, IV, III (E) II, III, IV, V, I

(B) 57. Of these steps, which one occurs earliest in the process of producing recombinant DNA?

(A) Human DNA fragments are mixed with the cut plasmids.

(B) The same restriction enzyme is used to isolate the gene of interest and to cut the plasmid DNA.

(C) Bacteria bearing the plasmid of interest are treated with antibiotics.

(D) The recombinant plasmids are mixed with bacteria.

(E) Bacteria carrying recombinant plasmids are cloned.

(B) 58. The major factor that restricts a fundamental niche to a realized niche is:

(A) climate.

(B) competition.

(C) a density-independant factor.

(D) species richness.

(E) whether it is an autotroph or heterotroph.

(D) 59. The high levels of pesticides found in birds of prey is an example of

(A) chemical cycling through an ecosystem.

(B) eutrophication.

(C) predation.

(D) the green world hypothesis.

(E) biological magnification.

(D) 60. The total biomass of photosynthetic autotrophs present in an ecosystem is known as the

(A) gross primary production

(B) trophic efficiency.

(C) secondary production

(D) standing crop.

(E) net primary production.

(E) 61. The fundamental difference between materials and energy in an ecosystem is that

(A) energy is cycled through ecosystems; materials are not.

(B) energy can be converted into materials; materials cannot be converted into energy.

(C) materials can be converted into energy; energy cannot be converted into materials.

(D) ecosystems are much more efficient in their transfer of energy than in their transfer of materials.

(E) materials are cycled through ecosystems; energy is not.

(D) 62. Nitrogen is available to plants only in the form of

(A) nitrate. (B) nitrite. (C) ammonium.

(D) A and C. (E) A, B, and C.

(E) 63. Which of the following statements about coral reef is **not** true?

(A) Corals are a diverse group of cnidarians.

(B) Corals can excrete external, carbonaceous skeletons.

(C) Symbiotic dinoflagellate algae live in their tissue.

(D) High water temperatures cause corals to ‘bleach’.

(E) The problem of bleaching in corals at Kenting National Park is especially severe in winter months.

(A) 64. Fire ants (*Solenopsis invicta*) are native to

(A) South America. (B) Australia. (C) Africa.

(D) Southeast Asia. (E) North America.

(B) 65. Which of the following statements about protected areas is **not** correct?

(A) Protected area management must be coordinated with management of lands outside the protected zone.

(B) Taiwan now has protected over 35% of the land areas.

(C) National parks are only one type of protected area.

(D) Most protected areas are small in size.

(E) The black-faced spoonbill (*Platalea minor*) has its own protected area at Tainan County.